

**PLAINTIFF'S  
EXHIBIT**

DUP-522

SPEC. 2891

DUP 0838003

SPECIFICATION NO. 2891

VICTORIA PLANT - PROJECT 6875

PACKING & GASKETS

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APPROVED FOR GENERAL DESIGN AND  
SPECIFICATIONS

FOR: E. I. DU PONT DE NEMOURS & CO., INC.

*S. C. Seale*  
Design Division, Engineering Department

8-3-50  
Date

*J. S. Sawyer*  
Engineering Service Division, Eng. Dept.

8/3/50  
Date

NOTE: Sheets 48 & 49 are  
Standard Packing Charts  
listing du Pont Code Numbers.  
Sheet 46 shows Pfandler Packings.  
Sheet 47 covers Flexitallic Gaskets.

7/31/50  
Specification No. 2891 Face Sheet  
Page 0 of 49

DUP 0838004

SPECIFICATION NO. 2891

VICTORIA PLANT - PROJECT 6875

PACKING & GASKETS

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7/31/50  
Specification No. 2891 Face Sheet  
Page 0 of 49

DUP 0838005

PACKING AND GASKET SPECIFICATIONS  
VICTORIA PLANT  
PROJECT 6875

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I N D E X

| <u>ITEM</u>                   | <u>PAGE</u> |
|-------------------------------|-------------|
| General Information           | 1           |
| Power Piping Gaskets          | 4           |
| Process Piping Gaskets        | 5           |
| Equipment Gaskets             | 7           |
| Expansion Joint Packing       | 31          |
| Shaft Packing                 | 36          |
| Tray Packing                  | 41          |
| Valve Packing                 | 43          |
| Pfautler Stuffing Box         | 46          |
| Standard Spiral Wound Gaskets | 47          |
| Du Pont Code Specifications   | 48          |

7/31/50  
Specification No. 2891  
Index

DUP 0838006

PACKING AND GASKET SPECIFICATIONS  
VICTORIA PLANT  
PROJECT 6875

GENERAL INFORMATION

Packing and gasket specifications have been developed for the Victoria Plant using the minimum number of packing and gasket material consistent with good practice. In nearly all cases, du Pont code materials (see included Code sheets) have been selected. Discussed below are the pertinent characteristics of the materials selected for Victoria and a brief discussion of the packing and gasketing of some equipment.

GASKETS

The following gasket materials have been selected for use at Victoria. Coded gasket materials are designated by prefixes S or G; i.e., S-1 or G-1. The prefix S indicates sheet material; the prefix G, cut gasket material. For the purposes of these specifications the prefix G has been generally used.

G-1 - This is a compressed white asbestos sheet bonded with Buna-S. It is a general service sheet suitable for use on steam, gas, air, ammonia, and caustic at all pressures and temperatures up to 750°F. It has been selected as a general service sheet for Victoria.

S-8 - This is a woven white asbestos tape, wire inserted and frictioned with Buna-S. It is for general service where cut sheet is uneconomical or difficult to install. It has been selected for use in a few locations where G-1 material would not be practical.

G-9 - This is a compressed blue African asbestos sheet bonded with Buna-S. It is for use with hot acids, nitric and sulfuric acid. It has been selected for use in the power house sulfuric acid lines.

G-11 - This is a black neoprene of approximately 60 durometer hardness. It is resistant to mineral oils, kerosene, and gasoline. It has been selected for use in sight glass installations and as a gasket material in Havg and Perminite piping.

G-40 - This is a compressed white asbestos sheet bonded with Buna-N. It is for use in aromatic and chlorinated hydrocarbon service. It has been selected as a general service sheet for organic service.

G-50 - This is "Teflon" gasket material. It is resistant to most chemicals. It has been selected for use in chlorine lines.

"Teflon" - The G-40 code includes sizes up to 12-in. O. D. only. "Teflon" material, larger than 12-in. O.D., is designated as "Teflon" rather than G-50. In addition to "Teflon" sheet as a gasket material, "Teflon" jackets have been selected for a number of installations. The Havg lines are gasketed with "Teflon" jacketed reinforced neoprene. Pfaudler glass-lined equipment is gasketed with "Teflon" jacketed

asbestos sheet. Haveg equipment is gasketed with "Teflon" jacketed blue African asbestos material.

#### PACKING

The following packing materials have been selected for use at Victoria:

R-3 - This is a white asbestos, square plaited braid material lubricated with mineral oil and graphite. It is a general service packing for use on water, oil, ammonia, and caustics. It has been selected for use in most water pumps not equipped with mechanical seals.

R-3W - This is a white asbestos, square plaited braid material that is lubricated with mineral oil and graphite and has a lead wire insertion. Its use is similar to that of R-3 but is especially designed for boiler feed pumps and other high temperature water pumps. It has been selected for use on boiler feed and condensate pumps.

R-4B - This is a blue African asbestos, square plaited braid material lubricated with a high melting point lubricant. It is for use on strong acid pumps and has been selected for use on sulfuric and other acid pumps not equipped with mechanical seals.

R-6 - This is a white asbestos, braid-over-braid material lubricated with mineral oil and graphite. It is a general service packing and has been selected for use in packing many valves.

R-8T - This is a white asbestos twisted rope lubricated with mineral oil and graphite. It is a general service packing and has been selected for use on packing valve stems that are so small that braided asbestos is impractical.

R-13X - This is a 90% white asbestos, braid-over-braid packing with a 20% high flash point lubricant with a brass wire insertion. It has been selected for use in packing high temperature steam valves and the expansion joints on all heat exchangers.

R-15 - This is a white asbestos, square plaited braid material with a soap lubricant. This is a solvent resistant packing and has been selected for all locations where packing is required in solvent service.

#### Garlock 5806

This is a blue African asbestos, jacketed with glass cloth. It has been selected as a tray packing in all towers.

#### Copper braid

This is a square plaited copper. It has been selected as the bottom ring in all heat exchanger expansion joints. Its purpose is to act as a bull ring centering the gland and in horizontal exchangers, to support the weight in the packing of the several components.

Packing and Gasket Specifications  
Victoria Plant - Project 6875

Chemlon 70A

This is a woven "Teflon" material resistant to most chemicals. It has been selected as the bottom ring for most agitator packings. It is manufactured by the John Crane Packing Company.

Rotameter Packing - All rotameters for service at Victoria should be packed with Johns-Manville experimental number 457-517. This is a square plaited braid, white asbestos impregnated with a "Teflon" suspensoid. It is satisfactory for use in all rotameter locations. This material is satisfactory for all normal packing service; however, it is relatively expensive and consequently its use has been limited to rotameter packing.

Pump Seals - The great majority of Victoria pumps will be equipped with mechanical seals. In a few cases, Ingersoll-Rand pumps will be equipped with Cameron seals. However, most pumps are to be equipped with John Crane Type 1 or Type 9 seals. The following Crane seals are to be used:

| <u>Pump Shaft Size, in.</u> | <u>Seal Type</u> |
|-----------------------------|------------------|
| 5/8                         | 1                |
| 1-1/8                       | 9                |
| 1-1/8                       | 1                |
| 1-1/4                       | 1                |
| 1-5/8                       | 9                |
| 1-5/8                       | 1                |
| 2                           | 9                |
| 2                           | 1                |
| 2-1/2                       | 9                |
| 2-1/2                       | 1                |
| 3-1/4                       | 1                |
| 3-3/8                       | 9                |

Heat Exchangers

The majority of multiple-pass heat exchangers have grooved tube sheets for gaskets. With the exceptions noted below, either G-1 or G-40 gaskets have been selected for use in these heat exchangers. The exceptions are:

| <u>Bldg.</u> | <u>28 MM lb./yr. Plant</u> | <u>Expansion to 56 MM lb./yr.</u> |
|--------------|----------------------------|-----------------------------------|
| 514          | Not recessed - not armored | Duplicate                         |
| 516          | Recessed but not armored   | Duplicate                         |
| 518          | Recessed - armored         | Duplicate                         |
| 520          | Armored - not recessed     | Duplicate                         |
| 512          | Recessed - not armored     | Duplicate                         |

PACKING AND GASKET SPECIFICATIONS  
VICTORIA PLANT  
PROJECT 6875

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POWER PIPING GASKETS

| <u>Service</u>           |         | <u>Pipe<br/>Material</u> | <u>Gasket Material</u> |
|--------------------------|---------|--------------------------|------------------------|
| Steam Piping             | 550 lb. | Steel                    | Spiral Wound*          |
| Steam Piping             | 175 lb. | Steel                    | duPont Code G-1        |
| Steam Piping             | 15 lb.  | Steel                    | duPont Code G-1        |
| Boiler Feedwater         | 600 lb. | Steel                    | Spiral Wound*          |
| Condensate Piping        | 550 lb. | Steel                    | Spiral Wound*          |
| Condensate Piping        | 175 lb. | Steel                    | Spiral Wound*          |
| Condensate Piping        | 15 lb.  | Steel                    | duPont Code G-1        |
| Compressed Air           |         | Steel                    | duPont Code G-1        |
| Chemical Feed System     |         | Steel                    | duPont Code G-1        |
| Sulfuric Acid            |         | Steel                    | duPont Code G-2        |
| Raw Water                |         | Steel                    | duPont Code G-1        |
| Soft Water to Deaerators |         | Rubber-lined             | Polythene 0.004 Film   |
| Well Water               |         | Steel                    | duPont Code G-1        |
| Soft Process Water       |         | Steel                    | duPont Code G-1        |
| Fire Protection          |         | Steel                    | duPont Code G-1        |

\* A suggested type is Flexitallic Gasket Company's  
Style CG..

Specification No. 2891

June 30, 1950

DUP 0838010

PACKING AND GASKET SPECIFICATIONS  
VICTORIA PLANT  
PROJECT 6875

PROCESS PIPING GASKETS

| <u>Service</u>                            | <u>Pipe Material</u> | <u>Gasket Material</u> |
|-------------------------------------------|----------------------|------------------------|
| Chlorine Liquid & Gas                     | Steel                | duPont Code G-50       |
| Propane Liquid & Gas                      | Steel                | duPont Code G-40       |
| Freon Liquid & Gas                        | Steel or Copper      | duPont Code G-40       |
| Inert Gas                                 | Steel                | duPont Code G-1        |
| Ammonia Liquid & Gas                      | Steel                | duPont Code G-1        |
| Butadiene Liquid & Gas                    | Nickel & Steel       | duPont Code G-40       |
| TMA Liquid & Gas                          | Stainless & Steel    | duPont Code G-1        |
| ADN & ADN Vapors                          | Steel                | duPont Code G-1        |
| Monoethanolamine                          | Steel                | duPont Code G-1        |
| Benzene Liquid, Vapors & Residues         | Stainless & Steel    | duPont Code G-40       |
| CaCO <sub>3</sub> Slurries                | Steel                | duPont Code G-1        |
| Waste Water to Solar System               | Steel                | duPont Code G-1        |
| Flux Oil                                  | Steel                | duPont Code G-40       |
| Caustic                                   | Nickel & Steel       | duPont Code G-1        |
| Process Air & Mixed Gas to Converter      | Steel                | duPont Code G-1        |
| Mixed Gas - Boiler to Absorber            | Steel                | duPont Code G-1        |
| Vent Gas - absorber to Power House        | Steel                | duPont Code G-1        |
| Vent Gas - Converter to Incinerator       | Steel                | duPont Code G-1        |
| Combustible Waste from Hydrogenation      | Steel                | duPont Code G-1        |
| Storm Water                               | Stainless & Steel    | duPont Code G-1        |
| Mixed Gas - H <sub>2</sub> N <sub>2</sub> | Steel                | duPont Code G-1        |
| Natural Gas                               | Steel                | duPont Code G-1        |

Specification No. 2891

DUP 0838011

Packing & Gasket Specifications  
Victoria Plant - Project 6875

6.

Process Piping Service

| <u>Service</u>                           | <u>Pipe Material</u> | <u>Gasket Material</u>                           |
|------------------------------------------|----------------------|--------------------------------------------------|
| NaCN & Caustic Solution                  | Steel                | duPont Code G-1                                  |
| Hydrochloric Acid - 35%                  | Rubber-lined         | Polythene 0.004 Film                             |
| Calcium Chloride - 20%                   | Rubber-lined         | Polythene 0.004 Film                             |
| Cyanation Catalyst Solution              | Rubber-lined         | Polythene 0.004 Film                             |
| Benzene Free Raffinate                   | Rubber-lined         | Polythene 0.004 Film                             |
| Catalyst Slurry                          | Rubber-lined         | Polythene 0.004 Film                             |
| Unstripped Filtrate                      | Rubber-lined         | Polythene 0.004 Film                             |
| Waste Brine                              | Rubber-lined         | Polythene 0.004 Film                             |
| Waste Brine                              | Haveg                | duPont Code G-11                                 |
| DND Reaction Products                    | Haveg                | "Teflon" Jacket -<br>1/8" Reinforced<br>Neoprene |
| Solutions of DNB, DNB Vapors,<br>and DNB | Stainless            | duPont Code G-40                                 |
| Combustible Liquid Wastes                | Nickel & Stainless   | duPont Code G-40                                 |
| Soft Water                               | Stainless            | duPont Code G-1                                  |
| Recycle NaCN - Rotameter to<br>Reactor   | Stainless            | duPont Code G-40                                 |
| Catalyst Rotameter to Reactor            | Stainless            | duPont Code G-1                                  |
| Refined NaCN                             | Stainless            | duPont Code G-1                                  |
| Calgon Solution                          | Stainless            | duPont Code G-1                                  |
| TMA Reactor Products                     | Stainless            | duPont Code G-40                                 |
| DCB Process & Feed                       | Nickel               | duPont Code G-40                                 |
| Foreshots                                | Hastelloy "C"        | duPont Code G-40                                 |
| DNB Reactor Products                     | Hastelloy "C"        | duPont Code G-40                                 |
| Stripped Brine                           | Permanite            | duPont Code G-11                                 |
| HCl                                      | Hastelloy "B"        | duPont Code G-1                                  |
| Process Waste Brine                      | Ampco 8              | duPont Code G-1                                  |

Specification No. 2891

June 30, 1950

DUP 0838012

**EQUIPMENT GASKET SPECIFICATIONS**  
**VICTORIA PLANT - PROJECT 6875**

DUP 0838013

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Equipment & Part<br>Description                                            | Gasket Material<br>(duPont Code No.)                            | Gasket Dimensions     |                   |                     | Bolt Holes        |                  | B.P.F.<br>No. |
|------------------------|-----|----------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------|-------------------|---------------------|-------------------|------------------|---------------|
|                        |     |                                                                            |                                                                 | O.D.                  | I.D.              | Th.                 | No.               | Size             |               |
| 101-820                | 1   | Elliot Heater<br>Manhole                                                   | G-1                                                             | 21-1/4                | 16-1/4            | 1/8                 |                   |                  | 107099        |
| 101-825                | 1   | High Pressure<br>Flash Tank -<br>11 x 15 Manhole                           | Armored asbestos                                                | -                     | -                 | 1/8                 |                   |                  | 1074          |
| 101-825.1              | 1   | Low Pressure<br>Flash Tank -<br>11 x 15 Manhole<br>30" Nozzle              | Armored asbestos<br>G-1                                         | 34-1/2                | 30                | 1/8                 | 28                | 1-3/8            | 107477        |
| 101-827                | 1   | Condensate Return<br>Tank<br>22" Manhole                                   | G-1                                                             | 27-1/2                | 22-1/2            | 1/8                 | 24                | 1                | 107477        |
| 102-801                | 1   | Permutit Softeners<br>18" Manhole<br>12" x 16" Manhole<br>4" x 6" Handhole | Polythene<br>S/S Armored<br>Asbestos<br>S/S Armored<br>Asbestos | 23-1/2<br>-<br>-<br>- | 18<br>-<br>-<br>- | .004<br>-<br>-<br>- | 24<br>-<br>-<br>- | 1<br>-<br>-<br>- | 106116        |
| 102-805                | 1   | Acid Storage Tank<br>22" Manhole                                           | G-9                                                             | 27-1/2                | 22-1/2            | 1/8                 | 24                | 1                | 105020        |
| 102-813                | 1   | Permutit Deaerator<br>16" Manhole                                          | G-1                                                             | 21-1/4                | 16-1/4            | 1/8                 | 16                | 7/8              | 107749        |
| 310-3 & 4              | 2   | Storage Tanks<br>Manhole<br>Agitator Opening<br>8" Nozzle                  | "Teflon" Envelop<br>with 1/8" Rein-<br>forced Neoprene          | 24<br>13-1/2<br>11    | 22<br>12<br>8     | 1/8<br>1/8<br>1/8   | 24<br>12<br>8     | 1<br>3/4<br>7/8  | 106918        |

DUP 0838014

Specification No. 2891

Equipment Gasket Specs. - Victoria - Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                              | Gasket Material<br>(dupont Code No.) | Gasket Dimensions |                |      |     | Bolt Holes |                 | B.P.F.<br>No. |
|------------------------|-----|----------------------------------------------------------|--------------------------------------|-------------------|----------------|------|-----|------------|-----------------|---------------|
|                        |     |                                                          |                                      | O.D.              | I.D.           | TH.  | No. | Size       | B.C.            |               |
| 311-10                 | 2   | Pressure Filter Tank<br>18" Manhole                      | Polythene                            |                   |                | .004 |     |            |                 | 106687        |
| 311-11                 | 7   | Rubber Lined Tank<br>Flanges                             | Polythene                            | 30                |                | .004 |     |            |                 | 107920        |
| 506-1.3                | 2   | Reboiler & Stripper<br>Column<br>Reboiler Ends           | G-1                                  | 40-1/2            | 35             | 1/8  | 30  | 3/4        | 38              | 104895        |
| 506-1.5                | 2   | CO <sub>2</sub> Condenser<br>Fixed Head<br>Floating Head | G-1                                  | Special<br>8-3/4  | 7              | 1/16 | 8   | 3/4        | 10-3/8<br>9-1/2 | 104890        |
| 506-1.9                | 2   | O <sub>2</sub> Removal Tower<br>Flanges                  | G-1                                  |                   |                | 1/8  |     |            |                 | 104890        |
| 506-1.11               | 2   | Gas Precoolers<br>Fixed Head<br>Floating Head            | G-1                                  | 9-5/8<br>8-3/4    | 8-5/8<br>7     | 1/16 | 8   | 3/4        | 10-3/8<br>9-1/2 | 104890        |
| 506-1.15               | 2   | CO <sub>2</sub> Absorbers<br>18" Manhole                 | G-1                                  | 22                | 18             | 1/8  | 16  | 3/4        | 20              | 104890        |
| 506-1.17               | 2   | Gas Aftercoolers<br>Fixed Head<br>Floating Head          | G-1                                  | 7-5/8<br>5-7/8    | 6-5/8<br>4-7/8 | 1/16 | 8   | 3/4        | 8-3/8<br>6-5/8  | 104890        |
| 506-1.21               | 2   | MEA Coolers<br>Fixed Head<br>Floating Head               | G-1                                  | 7-5/8<br>5-7/8    | 6-5/8<br>4-7/8 | 1/16 | 8   | 3/4        | 8-3/8<br>6-5/8  | 104890        |
| 506-1.25               | 2   | MEA Heat Exchanger<br>Channel<br>Floating Head           | G-1                                  | Special<br>5-7/8  | 4-7/8          | 1/16 | 8   | 3/4        | 8-3/8<br>6-5/8  | 104890        |

## Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

Specification No. 2691

DUP 0838015

| Equipment<br>Piece No. | No. | Description                                                                                   | Gasket Material<br>(duPont Code, No.)            | Gasket Dimensions                              |                                                    |                                            |                           | Bolt Holes          |                      | B.P.F.<br>No. |
|------------------------|-----|-----------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------------------------------------|---------------------------|---------------------|----------------------|---------------|
|                        |     |                                                                                               |                                                  | O.D.                                           | I.D.                                               | Th.                                        | No.                       | Size                | B.C.                 |               |
| 507-2                  | 5   | Vertical Coolers<br>Top Flange                                                                | G-1                                              | 28-1/4                                         | 24-1/4                                             | 1/8                                        | 20                        | 1-3/8               | 29-1/2               | 105056        |
| 508-2                  | 2   | TMA Vaporizer<br>Head Flange                                                                  | G-1                                              | 16-1/2                                         | 13                                                 | 1/8                                        | 16                        | 1-1/4               | 17-3/4               | 107568        |
| 509-1                  | 5   | Butadiene Stg. Tank<br>Manhole                                                                | G-40                                             | 23-3/4                                         | 20-1/4                                             | 1/8                                        | 20                        | 1-1/4               | 25                   | 105244        |
| 509-2                  | 3   | Chlorine Storage<br>Manhole<br>1" Nozzle<br>2" Nozzle<br>4" Nozzle<br>4" Nozzle<br>10" Nozzle | "Teflon"<br>G-50<br>G-50<br>G-50<br>G-50<br>G-50 | 23<br>2<br>3-5/8<br>6-3/16<br>6-3/16<br>12-3/4 | 21<br>1-1/2<br>2-7/8<br>5-3/16<br>5-3/16<br>11-1/4 | 1/8<br>1/16<br>1/16<br>1/16<br>1/16<br>1/8 | 24<br>24<br>8<br>8<br>3/4 | 1-1/2<br>7/8<br>3/4 | 27<br>8-1/2<br>7-7/8 | 105393        |
| 509-3                  | 3   | Ammonia Storage<br>Manhole                                                                    | G-1                                              | 23-7/8                                         | 20-1/4                                             | 1/8                                        | 20                        | 1-1/4               | 25                   | 105315        |
| 509-4                  | 2   | Caustic Storage<br>Manhole                                                                    | G-1                                              | 32-3/4                                         | 24                                                 | 1/8                                        | 28                        | 7/8                 | 30-1/4               | 105793        |
| 509-5                  | 2   | HCl Stge. Tank<br>Manhole                                                                     | Polychene                                        | 27-1/2                                         | 22-1/2                                             | .004                                       | 24                        |                     | 25                   | 105138        |
| 509-7                  | 1   | Refined ADN Stg.<br>Manhole                                                                   | G-1                                              | 32                                             | 24                                                 | 1/8                                        | 28                        | 7/8                 | 30-1/4               | 105236        |
| 509-8                  | 2   | Inert Gas Stg.<br>Manhole                                                                     | G-1                                              | 23-3/4                                         | 20-1/4                                             | 1/8                                        | 20                        | 1-1/4               | 25                   | 105277        |
| 509-9                  | 1   | Benzene Recycle Stg.<br>Manhole                                                               | G-40                                             | 32-3/4                                         | 24                                                 | 1/8                                        | 28                        | 7/8                 | 30-1/4               | 105236        |

DUP 0838016

10.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                             | Gasket Material<br>(duPont Code No.) | Gasket Dimensions          |                 |                   | Bolt Holes  |                   | B.P.F.<br>No.     |        |
|------------------------|-----|---------------------------------------------------------|--------------------------------------|----------------------------|-----------------|-------------------|-------------|-------------------|-------------------|--------|
|                        |     |                                                         |                                      | O.D.                       | I.D.            | Th.               | No.         | Size              |                   | B.C.   |
| 509-10                 | 1   | Instrument Air Sec.<br>Manhole                          | G-1                                  | 23-3/4                     | 20-1/4          | 1/8               | 20          | 1-1/4             | 25                | 105277 |
| 510-2                  | 1   | Butadiene Vaporizer<br>Cover                            | G-40                                 | 23-3/4                     | 20-1/4          | 1/8               | 20          | 1-1/4             | 25                | 107567 |
| 511-6                  | 2   | NH <sub>3</sub> Vaporizer<br>Head                       | G-1                                  | 16-5/8                     | 12-7/8          | 1/8               | 16          | 1-1/4             | 17-3/4            | 107568 |
| 512-25                 | 1   | Chlorine Still Col.<br>Flange                           | "Teflon" Jacket<br>with S-1 Sheet    | 28-1/8                     | 24              | 1/8               | 36          | 1-1/8             | 29-1/2            | 106820 |
| 512-26                 | 1   | Calandria<br>Head                                       | "Teflon" Jacket<br>with S-1 Sheet    | 30-1/2                     | 23-1/2          | 1/8               | 24          | 1-5/8             | 32                | 108299 |
| 512-27                 | 1   | Deplegator<br>Head                                      | "Teflon" Jacket<br>with S-1 Sheet    | 25-3/4                     | 19              | 1/8               | 24          | 1-5/8             | 27                | 107097 |
| 512-29                 | 1   | Separator<br>Head                                       | "Teflon"                             | 16-5/8                     | 12-1/2          | 1/8               | 16          | 1-1/4             | 17-3/4            | 108257 |
| 512-30                 | 5   | Preheaters<br>Channel<br>T.S. to Shell<br>Floating Head | G-40<br>G-1<br>G-40                  | Special<br>10-3/8<br>7-1/8 | 8-5/8<br>6-5/16 | 1/8<br>1/8<br>1/8 | 8<br>8<br>8 | 3/4<br>3/4<br>3/4 | 11<br>11<br>8-7/8 | 105832 |
| 512-31                 | 1   | Brine Cooler<br>Flanges (2)                             | G-1                                  | Special                    |                 | 1/8               | 20          | 7/8               | 30-7/8            | 107096 |
| 512-50                 | 1   | Dehydration Col.<br>Flanges<br>Manhole                  | G-40<br>G-40                         | 47-1/2<br>25               | 42<br>20        | 1/8<br>1/8        | 64<br>20    | 1<br>7/8          | 45<br>22-3/4      | 106821 |

DUP 0838017

## Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                      | Gasket Material<br>(dupont Code No.) | Gasket Dimension             |              |                   | Bolt Holes     |                   |                            | B.P.F.<br>No. |
|------------------------|-----|------------------------------------------------------------------|--------------------------------------|------------------------------|--------------|-------------------|----------------|-------------------|----------------------------|---------------|
|                        |     |                                                                  |                                      | U.D.                         | I.D.         | Th.               | No.            | Size              | B.C.                       |               |
| 512-51                 | 1   | Calandria<br>Channel<br>T.S. to Shell<br>Floating Head           | G-40<br>G-1<br>G-40                  | Special<br>24-3/8<br>21-1/2  | 23<br>20-3/4 | 1/8<br>1/8<br>1/8 | 24<br>24<br>20 | 3/4<br>3/4<br>3/4 | 25<br>25<br>23-1/4         | 106036        |
| 512-52                 | 1   | Butadiene Condenser<br>Channel                                   | G-40                                 | 47-5/8                       | 44-1/8       | 1/8               | 68             | 1                 | 45-7/8                     | 10708         |
| 512-54                 | 1   | Decanter<br>Manhole                                              | G-40                                 | 27-1/2                       | 22-1/2       | 1/8               | 24             | 1                 | 25                         | 106973        |
| 512-57                 | 1   | Butadiene Holdup Tank<br>Manhole                                 | G-40                                 | 27-1/2                       | 22-1/2       | 1/8               | 24             | 1                 | 25                         | 106708        |
| 512-58                 | 1   | Butadiene Flash Tank<br>Flange                                   | G-40                                 | 10-7/8                       | 8-1/4        | 1/16              | 8              | 7/8               | 11-3/4                     | 108208        |
| 512-59                 | 1   | Butadiene Vent Condenser<br>Flanges                              | G-40                                 | 14-1/2                       | 13-1/4       | 1/8               | 12             | 3/4               | 15-1/8                     | 17102         |
| 512-61                 | 1   | Butadiene Condenser<br>Channel<br>Rear T.S.                      | G-40<br>G-40                         | Special<br>Special           |              | 1/8<br>1/8        | 16<br>16       | 3/4<br>3/4        | 15-1/8<br>15-1/8           | 107335        |
| 512-68                 | 5   | Butadiene Preheater<br>Channel<br>T.S. to Shell<br>Floating Head | G-40<br>G-1<br>G-40                  | Special<br>17-3/4<br>14-9/16 | 16<br>13-3/4 | 1/8<br>1/8<br>1/8 | 16<br>24<br>12 | 3/4<br>3/4<br>3/4 | 18-3/8<br>18-3/8<br>16-3/8 | 105832        |
| 512-71                 | 15  | Tubular Reactors<br>Nozzle                                       | Spiral Wound                         |                              |              |                   |                |                   |                            | 105278        |
| 512-80                 | 5   | Expanded Reactors<br>Flanges                                     | G-40                                 | 45-1/4                       | 39-3/8       | 1/8               | 40             | 1-1/8             | 43                         | 106385        |
| 512-82                 | 5   | Tar Separators<br>Head                                           | G-40                                 | 42-3/4                       | 36           | 1/8               | 40             | 1-1/8             | 39-3/4                     | 108258        |

## Specification No. 2891

## Equipment Gasket Specs. - Victoria

Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                                  | Gasket Material            |                                         | Gasket Dimensions            |                   |                | Bolt Holes        |                            | B.P.F.<br>No. |
|------------------------|-----|------------------------------------------------------------------------------|----------------------------|-----------------------------------------|------------------------------|-------------------|----------------|-------------------|----------------------------|---------------|
|                        |     |                                                                              | (duPont Code No.)          | O.D.                                    | I.D.                         | Th.               | No.            | Size              | B.C.                       |               |
| 512-84                 | 5   | Partial Condensers<br>T.S. To Shell<br>Floating Head<br>Channel              | G-1<br>G-40<br>G-40        | 15-3/4<br>12-3/4<br>15-3/4              | 14-1/2<br>12<br>14-1/2       | 1/8<br>1/8<br>1/8 | 12<br>12<br>12 | 3/4<br>3/4<br>3/4 | 16-3/8<br>14-1/2<br>16-3/8 | 106035        |
| 512-85                 | 1   | Circulating Water Cooler<br>Head<br>T.S. to Shell<br>Floating Head<br>Cooler | G-40<br>G-1<br>G-40<br>G-1 | Special<br>18-1/8<br>14-7/8<br>19-13/16 | 16-1/2<br>14-1/8<br>18-15/16 | 1/8<br>1/8<br>1/8 | 16<br>16<br>20 | 7/8<br>7/8<br>7/8 | 19<br>19<br>21             | 106127        |
| 512-87                 | 1   | Tar Receiver                                                                 |                            |                                         |                              |                   |                |                   |                            | 108209        |
| 512-88                 | 1   | Products Condenser<br>Flange<br>Flange                                       | G-40<br>G-40               | 24<br>20-7/8                            | 22<br>20-1/8                 | 1/8<br>1/8        | 24<br>24       | 7/8<br>7/8        | 24-7/8<br>22-1/2           | 106054        |
| 512-90                 | 1   | Stripping Still Col.<br>Flanges<br>Manhole                                   | G-40<br>G-40               | 59-1/2<br>25                            | 53-1/2<br>20                 | 1/8<br>1/8        | 64<br>20       | 1<br>7/8          | 57<br>22-3/4               | 106819        |
| 512-91                 | 1   | Stripping Still Reboiler<br>Head to T.S.<br>Shell to T.S.<br>Manhole         | G-40<br>G-1<br>G-40        | Special<br>28-1/8<br>27-1/2             | 23-3/4<br>22-1/2             | 1/8<br>1/8<br>1/8 | 28<br>28<br>24 | 7/8<br>7/8<br>1   | 26-5/8<br>26-5/8<br>25     | 106963        |
| 512-92                 | 2   | Stripping Still<br>Condenser<br>Channels                                     | G-40                       | 43-5/8                                  | 40-1/8                       | 1/8               | 62             | 1                 | 41-7/8                     | 107082        |
| 512-93                 | 1   | Crude DCB Cooler<br>Channel<br>Fixed T.S.<br>Floating Head                   | G-40<br>G-1<br>G-40        | Special<br>12-1/2<br>Special            | 11-1/4                       | 1/8<br>1/8<br>1/8 | 12<br>12<br>12 | 3/4<br>3/4<br>3/4 | 13-1/8<br>13-1/8<br>11-3/8 | 106034        |

DUP 0838019

13.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                                          | Gasket Material<br>(dupont Code No.) | Gasket Dimensions                    |                              |                          | Bolt Holes           |                          |                                      | B.P.F.<br>No. |
|------------------------|-----|--------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------|------------------------------|--------------------------|----------------------|--------------------------|--------------------------------------|---------------|
|                        |     |                                                                                      |                                      | O.D.                                 | I.D.                         | Th.                      | No.                  | Size                     | H.C.                                 |               |
| 512-100 &<br>101       | 2   | Caustic Scrubber<br>Top Flanges<br>Manhole<br>Special Nozzle                         |                                      | 61<br>27-1/2<br>27-1/2               | 54<br>22-1/2<br>21-3/8       | 1/8<br>1/8<br>1/8        | 64<br>24<br>24       | 1-1/8<br>1<br>1          | 58<br>25<br>25                       | 108402        |
| 512-103                | 1   | Caustic Entrain-<br>ment Separator<br>32" Flange                                     | G-40                                 | 37-1/2                               | 32                           | 1/8                      | 40                   | 7/8                      | 35                                   | 108259        |
| 512-120                | 1   | Recycle Cooler<br>Channel<br>Fixed T.S. to Shell<br>Floating Head<br>Plg.Hd.to Cover | G-40<br>G-40<br>G-40<br>G-40         | 17-3/4<br>17-3/4<br>14-3/4<br>15-1/2 | 16-5/8<br>16-5/8<br>14<br>14 | 1/8<br>1/8<br>1/8<br>1/8 | 16<br>16<br>16<br>16 | 3/4<br>3/4<br>3/4<br>3/4 | 18-3/8<br>18-3/8<br>16-1/2<br>16-1/2 | 106033        |
| 512-150                | 1   | Topping Still<br>Column<br>Head<br>Flange<br>Manhole                                 | G-40<br>G-40<br>G-40<br>G-40         | 65-1/2<br>65-1/2                     | 60<br>60                     | 1/8<br>1/8<br>1/8        | 72<br>72             | 1<br>1                   | 63<br>63                             | 106964        |
| 512-151                | 1   | Topping Still<br>Reboiler<br>Head to T. S.<br>Shell to T.S.<br>Manhole               | G-40<br>G-40<br>G-40                 | Special<br>28-1/2<br>27-1/2          | 23-3/4<br>22-1/2             | 1/8<br>1/8<br>1/8        | 28<br>28<br>24       | 7/8<br>7/8<br>1          | 26-5/8<br>26-5/8<br>25               | 106963        |
| 512-152                | 1   | Topping Still Condenser<br>Channel<br>T.S. to Shell<br>Floating Head                 | G-40<br>G-40<br>G-40                 | 36-1/4<br>36-1/4<br>32-1/2           | 34-3/4<br>34-3/4<br>31-1/4   | 1/8<br>1/8<br>1/8        | 24<br>24<br>28       | 7/8<br>7/8<br>3/4        | 37<br>37<br>34-3/8                   | 106032        |
| 512-154                | 1   | Vertical Condenser<br>Channel<br>Rear T.S.                                           | G-40<br>G-40                         | Special<br>15-3/4                    | 14-1/2                       | 1/8<br>1/8               | 12<br>12             | 3/4<br>3/4               | 16-3/8<br>16-3/8                     | 107255        |

DUP 0838020

Specification No. 2891

14.

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                           | Gasket Material<br>(DuPont Code No.) | Gasket Dimensions          |                            |                   | Bolt Holes     |                   |                            | B.P.F.<br>No. |
|------------------------|-----|-----------------------------------------------------------------------|--------------------------------------|----------------------------|----------------------------|-------------------|----------------|-------------------|----------------------------|---------------|
|                        |     |                                                                       |                                      | O.D.                       | I.D.                       | Th.               | No.            | Size              | P.C.                       |               |
| 512-164                | 1   | Tails Cooler<br>Channel<br>Fixed T.S. to Shell<br>Floating Head       | G-40<br>G-1<br>G-40                  | Special<br>12<br>Special   | 10-3/4                     | 1/8<br>1/8<br>1/8 | 12<br>12<br>12 | 7/8<br>7/8<br>7/8 | 13-1/8<br>13-1/8<br>11-3/8 | 106772        |
| 512-169                | 1   | Refined DCB Cooler<br>Flanges<br>Bear T.S.                            | G-40<br>G-1                          | Special<br>12              | 10-1/2                     | 1/8               | 12             | 7/8               | 13-1/8                     | 106997        |
| 512-170                | 1   | Refining Still Condenser<br>Channel<br>Rear Head                      | G-40<br>G-40                         | Special<br>15-3/4          | 14-1/2                     | 1/8<br>1/8        | 12<br>12       | 3/4<br>3/4        | 16-3/8<br>16-3/8           | 107255        |
| 512-180                | 1   | Batch Still Column<br>Flanges<br>Manhole                              | G-40<br>G-40                         | 65-1/2                     | 60                         | 1/8<br>1/8        | 72             | 1-1/8             | 63                         | 106966        |
| 512-181                | 1   | Batch Still Kettle<br>Manhole                                         | G-40<br>G-40                         | 27-1/2<br>32               | 22-1/2<br>24               | 1/8<br>1/8        | 24<br>20       | 1<br>1-3/8        | 25<br>29-1/2               | 105714        |
| 512-182                | 1   | Vertical Condenser<br>Channel<br>Fixed T.S. to Shell<br>Floating Head | G-40<br>G-1<br>G-40                  | 36-1/4<br>36-1/4<br>32-1/2 | 34-3/4<br>34-3/4<br>31-1/4 | 1/8<br>1/8<br>1/8 | 24<br>24<br>28 | 7/8<br>7/8<br>3/4 | 37<br>37<br>34-3/8         | 106032        |
| 512-184                | 1   | Batch Still Condenser<br>Channel<br>Rear Head                         | G-40<br>G-40                         | Special<br>15-3/4          | 14-1/2                     | 1/8<br>1/8        | 12             | 3/4<br>3/4        | 16-3/8<br>16-3/8           | 107255        |
| 512-201                | 1   | Caustic Deaerator<br>Heads                                            | G-1                                  |                            |                            |                   |                |                   |                            | 106320        |
| 512-213                | 1   | Condensate Squelcher<br>Head                                          | G-1                                  | 28-1/4                     | 24                         | 1/8               | 24             | 7/8               | 26-1/2                     | 107965        |

DUP 0838021

15.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                 | Gasket Material<br>(duPont Code No.) | Gasket Dimensions      |                        |                   | Bolt Holes     |                         |                        | B.P.F.<br>No. |
|------------------------|-----|---------------------------------------------|--------------------------------------|------------------------|------------------------|-------------------|----------------|-------------------------|------------------------|---------------|
|                        |     |                                             |                                      | O.D.                   | I.D.                   | Th.               | No.            | Size                    | B.C.                   |               |
| 512-1                  | 2   | Crude DCB Stg. Tank<br>Manhole              | G-40                                 | 27-1/2                 | 22-1/2                 | 1/8               | 24             | 1                       | 25                     | 105409        |
| 513-2                  | 2   | Refined DCB Stg. Tank<br>Manhole            | G-40                                 | 27-1/2                 | 22-1/2                 | 1/8               | 24             | 1                       | 25                     | 105882        |
| 513-3                  | 1   | Batch Still Feed Tank<br>Manhole            | G-40                                 | 27-1/2                 | 22-1/2                 | 1/8               | 24             | 1                       | 25                     | 105409        |
| 513-4                  | 1   | Flux Oil Stg. Tank<br>Manhole               | G-40                                 | 27-1/2                 | 22-1/2                 | 1/8               | 24             | 1                       | 25                     | 105597        |
| 513-5                  | 1   | Waste Organic Stg.<br>Tank                  | G-40                                 | 27-1/2                 | 22-1/2                 | 1/8               | 24             | 1                       | 25                     | 105409        |
| 513-6                  | 1   | Dilute Caustic Stg.<br>Manhole              | G-1                                  | 27-1/2                 | 22-1/2                 | 1/8               | 24             | 1                       | 25                     | 105597        |
| 513-8                  | 1   | Propane Stg. Tank<br>Manhole                | G-40                                 | 25-3/4                 | 20-1/4                 | 1/8               | 24             | 1-3/8                   | 27                     | 107691        |
| 513-30                 | 1   | Batch Still Dis-<br>tillate Tank<br>Manhole | G-40                                 | 27-1/2                 | 22-1/2                 | 1/8               | 24             | 1                       | 25                     | 107466        |
| 514-1                  | 1   | Ammonia Vaporizer<br>Flange                 | G-1                                  | 33-3/4                 | 32-1/2                 | 1/8               | 32             | 1-1/8                   | 34-7/8                 | D80400        |
| 514-3                  | 1   | Ammonia Superheater<br>8" Nozzles           | G-1                                  | 11                     | 8-3/4                  | 1/16              | 8              | 3/4                     | 11-3/4                 | D79657        |
| 514-8                  | 2   | Gas Filter<br>Head<br>Inlet<br>Outlet       | G-1<br>G-1<br>G-1                    | 78<br>28-1/4<br>28-1/4 | 72<br>24-1/4<br>24-1/4 | 1/8<br>1/8<br>1/8 | 72<br>20<br>20 | 1-1/8<br>1-3/8<br>1-3/8 | 76<br>29-1/2<br>29-1/2 | 104768        |

## Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                        | Gasket Material<br>(duPont Code No.) | Gasket Dimensions            |                                  |                          | Bolt Holes    |                 |                     | B.P.F.<br>No. |
|------------------------|-----|--------------------------------------------------------------------|--------------------------------------|------------------------------|----------------------------------|--------------------------|---------------|-----------------|---------------------|---------------|
|                        |     |                                                                    |                                      | O.D.                         | I.D.                             | Th.                      | No.           | Size            | B.C.                |               |
| 514-9                  | 2   | Mixers<br>24" Flanges                                              | G-1                                  | 28-1/4                       | 24-1/4                           | 1/8                      | 20            | 1-1/4           | 29-1/2              | D80055        |
| 514-10                 | 2   | Converter Top Cone<br>Bottom Flange<br>Bottom Flange<br>Top Flange | G-1<br>S-8<br>G-1                    | 83<br>77-1/2<br>27-1/4       | 77-1/2<br>73-1/8<br>22-3/4       | 1/8<br>1/8               | 80<br>20      | 1<br>1-3/8      | 80-1/2<br>29-1/2    | D79598        |
| 514-11                 | 2   | Waste Heat Boiler<br>Manhole (oval)                                |                                      |                              | 11 x 15                          |                          |               |                 |                     | 104089        |
| 514-12                 | 1   | Absorber<br>Flanges<br>Manhole                                     | G-1<br>G-1                           | 149-1/4<br>27-1/2            | 144<br>22-1/2                    | 1/8<br>1/8               | 132<br>24     | 1-1/8<br>1      | 147<br>25           | 104665        |
| 514-13                 | 1   | Vertical Cooler<br>T.S. to Shell<br>Channel<br>Fltg. Hd. to Shell  | G-1<br>G-1<br>G-1                    | 35-1/8<br>Special<br>32-1/8  | 34-1/8<br>30-7/8                 | 1/8<br>1/8               | 32            | 7/8             | 36-1/2              | 105610        |
| 514-14                 | 1   | Gas Cooler<br>Head<br>Flanges                                      | G-1<br>G-1                           | 36<br>38-3/4                 | 30<br>30                         | 1/8<br>1/8               | 32<br>28      | 1-1/8<br>1-1/4  | 34<br>36            | D79897        |
| 514-20                 | 1   | Vertical Steel Tank<br>Manhole                                     | G-1                                  | 27-1/2                       | 22-1/2                           | 1/8                      | 24            | 1               | 25                  | 104651        |
| 514-25                 | 1   | Precipitator<br>Manhole<br>Cover<br>Vapor Seal<br>Packing Ring     | G-1<br>G-1<br>G-1<br>Neoprene        | 27-1/2<br>108<br>11<br>5-1/2 | 22-1/2<br>102<br>8-1/2<br>2-5/16 | 1/8<br>1/8<br>1/8<br>3/8 | 24<br>80<br>7 | 1<br>3/4<br>1/2 | 25<br>105-1/2<br>10 | W99211        |
| 514-27                 | 2   | Oilwer Filter<br>Hood Flange<br>Side Flange<br>Discharge Flange    | G-6<br>G-6<br>G-6<br>G-6             |                              |                                  |                          |               |                 |                     | 105293        |

DUP 0838023

17.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                    | Gasket Material<br>(duPont Code No.) | Gasket Dimensions           |                                  |                          | Bolt Holes     |                  |                     | B.P.P.<br>No. |
|------------------------|-----|----------------------------------------------------------------|--------------------------------------|-----------------------------|----------------------------------|--------------------------|----------------|------------------|---------------------|---------------|
|                        |     |                                                                |                                      | O.D.                        | I.D.                             | Th.                      | No.            | Size             | B.C.                |               |
| 514-28                 | 1   | Calcium Chloride<br>Strainer<br>Ring Gasket<br>Cover           | G-3<br>G-1                           | 8-1/4<br>13-1/2             | 6-1/4<br>8-1/2                   | 1/4<br>1/8               | 8              | 7/8              | 11-3/4              | 106810        |
| 514-34                 | 2   | Separator<br>Head                                              | G-1                                  | 40-1/4                      | 37                               | 1/8                      | 44             | 1/8              | 41-3/8              | 107116        |
| 514-36                 | 1   | Air Scrubber<br>12" Flanges                                    | G-1                                  | 16-1/8                      | 12-7/8                           | 1/8                      | 12             | 1                | 17                  | 106039        |
| 514-38                 | 1   | Refined Cooler<br>Channel<br>T.S. to Shell                     | G-1<br>G-1                           | 14-9/16                     | 11-5/16                          | 1/8<br>1/8               | 5              | 7/8              | 15-3/4              | 105609        |
| 514-39                 | 2   | Slurry Tanks<br>Manhole<br>Cover<br>Vapor Seal<br>Packing Ring | G-1<br>G-1<br>G-1<br>G-11            | 27-1/2<br>78<br>11<br>5-1/8 | 22-1/2<br>72<br>8-1/4<br>2-11/16 | 1/8<br>1/8<br>1/8<br>3/8 | 24<br>60<br>12 | 1<br>3/4<br>7/16 | 25<br>75-1/2<br>10  | W99096        |
| 514-41                 | 2   | Neutralizing Tanks<br>Head<br>48" Manhole<br>22" Manhole       | Polythene<br>Polythene<br>Polythene  | 128<br>53-1/2<br>27-1/2     | 120<br>48<br>21-1/2              | .004<br>.004<br>.004     | 144<br>48<br>8 | 1<br>1<br>1      | 124-1/2<br>51<br>25 | 107045        |
| 514-55                 | 1   | Inert Gas Stg. Tank<br>Manhole                                 | G-1                                  | 25-3/4                      | 20-1/4                           | 1/8                      | 24             | 1-3/8            | 27                  | 104973        |
| 515-1                  | 2   | Crude NACN Stg. Tanks<br>Manhole                               | G-1                                  | 32-3/4                      | 24                               | 1/8                      | 28             | 7/8              | 30-1/4              | 105235        |
| 515-2                  | 2   | Refined NACN Stg. Tanks<br>Manhole                             | G-1                                  | 32-3/4                      | 24                               | 1/8                      | 28             | 7/8              | 30-1/4              | 105235        |
| 515-23                 | 1   | Crude Cooler<br>T.S. to Shell<br>Channel                       | G-1<br>G-1                           | 15-1/8<br>Special           | 14-3/8                           | 1/8                      | 16             | 3/4              | 16-1/4              | 105609        |

DUP 0838024

Specification No. 2691

18.

Equipment Gasket Specs. - Victoria

Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                          | Gasket Material<br>(duPont Code No.)                                                                 | Gasket Dimensions               |                                 |                          | Bolt Holes |            | B.P.F.<br>No. |         |
|------------------------|-----|------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|--------------------------|------------|------------|---------------|---------|
|                        |     |                                                      |                                                                                                      | U.D.                            | I.D.                            | Th.                      | No.        | Size       |               | B.C.    |
| 516-1                  | 2   | HCl Feed Tanks<br>Rubber-lined<br>Manhole            | Polychene                                                                                            | 27-1/2                          | 22                              | .004                     | 24         | 1          | 25            | 105888  |
| 516-5                  | 4   | Reactors - Glass-lined<br>Cover                      | "Teflon" Jacketed<br>Asbestos                                                                        | 72-1/4                          | 67                              | 3/8                      |            |            |               | 107178  |
| 516-8                  | 1   | Flash Cooling Tank<br>Glass-lined<br>Manhole         | "Teflon" Jacketed<br>Asbestos                                                                        | 23                              | 19                              | 1/4                      | 12         |            |               | 106565  |
| 516-9                  | 1   | Reflux Condenser<br>Head<br>Head<br>Flange<br>Flange | Felted Asbestos<br>Felted Asbestos<br>"Teflon" Jacketed<br>Asbestos<br>"Teflon" Jacketed<br>Asbestos | 28-9/16<br>29<br>29<br>28-9/16  | 8<br>14-1/2<br>27-1/2<br>27-1/2 | 1/8<br>1/8<br>1/8<br>1/8 |            |            |               | 106895  |
| 516-20                 | 1   | Mixer Settler Unit<br>All Cover Openings<br>Covers   | W-1B<br>W-1B                                                                                         | 29<br>33-3/4<br>30-1/2<br>1-1/4 | 27<br>33-1/4<br>29<br>1-1/16    | 1/8<br>1/8<br>1/8<br>1/8 |            |            |               | 106858  |
| 516-40                 | 1   | Benzene Flash Tank<br>Head<br>Manhole                | "Teflon" Jacketed<br>Blue Asbestos<br>"Teflon" Jacketed                                              | 22-1/2                          | 57-1/4<br>19-1/2                | 5/16<br>3/16             | 34<br>14   | 7/8<br>5/8 | 23-1/8        | 107060  |
| 516-50                 | 1   | Catalyst Preheator<br>Rubber<br>Manhole              | Polychene                                                                                            | 27-1/2                          | 22-1/2                          | .004                     | 24         | 1          | 25            | D-81081 |

## Specification No. 2891

## Equipment Gasket Specs. - Victoria

Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                          | Gasket Material<br>(dupont Code No.)      | Gasket Dimensions |            |            | Bolt Holes |            |                  | B.P.F.<br>No. |
|------------------------|-----|------------------------------------------------------|-------------------------------------------|-------------------|------------|------------|------------|------------|------------------|---------------|
|                        |     |                                                      |                                           | O.D.              | I.D.       | Th.        | No.        | Size       | B.C.             |               |
| 516-52                 | 1   | Thickener Feed Tank<br>Manhole                       | Polychene                                 | 27-1/2            | 22-1/2     | .004       | 24         | 1          | 25               | D81081        |
| 516-58                 | 1   | Catalyst Dissolving<br>Tank<br>Manhole               | Polychene                                 | 27-1/2            | 22-1/2     | .004       | 24         | 1          | 25               | D81100        |
| 516-70                 | 1   | HGN Stripper Column<br>Column Section                | "Teflon" Jacketed<br>Blue Asbestos<br>" " | 46-1/2<br>45-1/2  | 1/8<br>1/8 |            |            |            |                  | 106055        |
| 516-73                 | 1   | HGN Absorber Column<br>Column Section                | "Teflon" Jacketed<br>Blue Asbestos<br>" " | 33-1/2<br>34-1/2  | 1/8<br>1/8 |            |            |            |                  | 106055        |
| 516-75                 | 1   | Absorber Solution Cooler<br>Channel<br>T.S. to Shell | Armored Asbestos<br>G-40                  | 29-13/16          | 28-11/16   | 1/8        | 28         | 7/8        | 31               | 106962        |
| 516-76                 | 1   | HGN Absorber<br>Solution Tank<br>Manhole             | G-40                                      | 27-1/2            | 22-1/2     | 1/8        | 24         | 1          | 25               | 106679        |
| 516-79                 | 1   | Recycled NACN Cooler<br>Channel<br>Top Head          | Armored Asbestos<br>G-1                   | 11                | 8          | 1/8<br>1/8 | 12<br>8    | 7/8<br>7/8 | 11-3/4<br>11-3/4 | 107289        |
| 516-81                 | 1   | Recycled NACN Decanter<br>Head                       | G-40                                      | 46                | 42         | 1/8        | 28         | 3/4        | 44-1/4           | 107540        |

DUP 0838026

20.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                   | Gasket Material<br>(dupont Code No.) | Gasket Dimensions |        |      |     | Bolt Holes              |                           | B.P.F.<br>No. |
|------------------------|-----|-----------------------------------------------|--------------------------------------|-------------------|--------|------|-----|-------------------------|---------------------------|---------------|
|                        |     |                                               |                                      | O.D.              | I.D.   | Th.  | No. | Size                    | B.C.                      |               |
| 516-101                | 1   | Level Control Pot<br>Flange                   | G-40                                 | 16                | 12     | 1/8  | 12  | 3/4                     | 14-1/2                    | D83140        |
| 516-102                | 1   | Level Control Pot<br>Flange                   | G-40                                 | 16                | 12     | 1/8  | 12  | 3/4                     | 14-1/2                    | D83141        |
| 516-103                | 1   | Level Control Pot<br>Flange                   | G-40                                 | 16                | 12     | 1/8  | 12  | 3/4                     | 14-1/2                    | D83142        |
| 516-104                | 1   | Level Control Pot<br>Flange                   | G-40                                 | 16                | 12     | 1/8  | 12  | 3/4                     | 14-1/2                    | D83140        |
| 516-110                |     | Interface Separator<br>Flange                 | G-40                                 | 13-1/4            | 10     | 1/8  | 12  | 1                       | 14-1/4                    |               |
| 517-1                  | 2   | NaOH Recycle Stg. Tanks<br>Manhole            | G-40                                 | 27-1/2            | 22-1/2 | 1/8  | 24  | 1                       | 25                        | 105597        |
| 517-2                  | 2   | Catalyst Solution<br>Storage Tanks<br>Manhole | Polythene                            | 27-1/2            | 22-1/2 | .004 | 25  | 1                       | 25                        | 106038        |
| 517-5                  | 1   | Raffinate Holdup<br>Storage Tank<br>Manhole   | "Teflon" Jacketed<br>Neoprene        |                   | 22-1/2 | 1/8  | 24  | 1                       | 25                        | 107288        |
| 517-6                  | 2   | Washed Prods. Soln. Tank<br>Manhole           | "Teflon" Jacketed<br>Neoprene        |                   | 22-1/2 | 1/8  | 24  | 1                       | 25                        | 107288        |
|                        |     | 24" Nozzle<br>16" Nozzle<br>Bayonet Heater    | G-1                                  | 20-1/4            | 16     | 1/8  | 16  | 1-3/8<br>1-1/8<br>1-1/8 | 29-1/2<br>1-1/8<br>21-1/4 |               |
| 517-7                  | 1   | Filtrate Holdup Tank<br>Manhole               | Polythene                            | 27-1/2            | 22-1/2 | .004 | 24  | 1                       | 25                        | D81446        |

DUP 0838027

21.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                                                          | Gasket Material<br>(DuPont Code No.) | Gasket Dimensions              |                                        |                          | Bolt Holes     |                         |                            | B.P.F.<br>No. |
|------------------------|-----|------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------|----------------------------------------|--------------------------|----------------|-------------------------|----------------------------|---------------|
|                        |     |                                                                                                      |                                      | O.D.                           | I.D.                                   | Th.                      | No.            | Size                    | B.C.                       |               |
| 518-1                  | 2   | TMA Reactor<br>Top Flange<br>Bottom Flange<br>Bottom Nozzle                                          | "Teflon" Jacket S-1<br>"<br>"        | 35-3/4<br>31-1/2<br>11-7/8     | 32<br>26<br>8                          | 1/8<br>1/8<br>1/8        | 32<br>32<br>12 | 1-1/2<br>1-3/8<br>1-1/2 | 37-1/4<br>33-1/4<br>13     | 109112        |
| 518-2                  | 1   | TMA Reactor Heater<br>Channel<br>T.S. to Shell<br>Floating Head                                      | G-40<br>Spiral Wound<br>G-40         | Special<br>Special             |                                        |                          | 16<br>32       | 7/8<br>7/8              | 16-1/8<br>18-7/8           | 108207        |
| 518-5                  | 1   | Reactor Feed Tank<br>24" Manhole<br>18" Manhole                                                      | "Teflon" Jacketed<br>Asbestos<br>"   | 27<br>21-3/4                   | 24<br>18-1/2                           | 1/8<br>1/8               |                |                         |                            | 107811        |
| 518-7                  | 1   | Settling Tank<br>Manhole                                                                             | G-40                                 | 23-3/4                         | 20-1/4                                 | 1/8                      | 20             | 1-1/4                   | 25                         | 107290        |
| 518-9                  | 1   | Flash Condenser<br>Channel (2)<br>T.S. to Shell<br>Floating Head                                     | G-40<br>G-1<br>G-40                  | 19-3/8<br>19-3/8<br>17-3/8     | 16<br>18<br>16-3/8                     | 1/8<br>1/8<br>1/8        | 16<br>16       | 3/4<br>3/4              | 20-1/2<br>20-1/2           | 107717        |
| 518-10                 | 1   | TMA Stripping Col.<br>Manhole<br>Top Flange                                                          | G-40<br>G-40                         | 23-3/4<br>39-3/8               | 19-1/2<br>35-3/8                       | 1/8<br>1/8               | 20<br>36       | 1-1/4<br>1              | 25<br>40-3/8               | 108577        |
| 518-11                 | 1   | TMA Col. Calandria<br>Channel (2)<br>Fixed T.S.<br>Floating T.S.<br>to Channel<br>Floating Hd. Cover | G-40<br>G-1<br>G-40<br>G-40          | 26<br>26<br>21-15/16<br>22-7/8 | 24-3/4<br>24-3/4<br>21-3/16<br>21-3/16 | 1/8<br>1/8<br>1/8<br>1/8 | 24<br>32<br>20 | 3/4<br>3/4<br>3/4       | 26-5/8<br>26-5/8<br>23-1/2 | 108117        |

DUP 0838028

22.

Specification No. 2891

Equipment Gasket Specs. • Victoria Project 6875 (All dimensions given in inches)

| Equipment<br>Place No. | No. | Description                                                                       | Gasket Material<br>(DuPont Code No.)                | Gasket Dimensions            |                            |                   | Bolt Holes     |                   | B.P.F.<br>No.                           |
|------------------------|-----|-----------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------|----------------------------|-------------------|----------------|-------------------|-----------------------------------------|
|                        |     |                                                                                   |                                                     | O.D.                         | I.D.                       | Th.               | No.            | Size              |                                         |
| 518-12                 | 1   | TMA Stripping Still<br>Condenser<br>Channel (2)<br>T.S. to Shell<br>Floating Head | G-40<br>G-1<br>G-40                                 | 37-7/8<br>37-7/8<br>34-5/8   | 35-7/8<br>35-7/8<br>33-3/8 | 1/8<br>1/8<br>1/8 | 36<br>36       | 7/8<br>7/8        | 108085<br>39-1/8<br>39-1/8              |
| 518-14                 | 2   | TMS Stripping Tails<br>Cooler<br>Channel (2)<br>T.S. to Shell<br>Floating Head    | S/S armored asbestos<br>G-1<br>S/S armored asbestos | Special<br>15-1/8<br>Special | 14-3/8                     | 1/8               | 16             | 7/8               | 107734<br>16-3/8                        |
| 518-20                 | 1   | TMA Scrubber                                                                      |                                                     |                              |                            |                   |                |                   | 108765                                  |
| 518-22                 | 1   | Recovered TMA Condenser<br>Channel (2)<br>T.S. to Shell<br>Floating Head          | S/S armored asbestos<br>G-1<br>G-40                 | Special<br>11-1/2<br>8       | 10-3/4<br>7-1/4            | 1/16<br>1/16      | 16<br>16       | 3/4               | 108491<br>12-5/8                        |
| 518-23                 | 1   | Recycle TMA Tank<br>Manhole                                                       | G-40                                                | 23-3/4                       | 20-1/4                     | 1/8               | 20             | 1-1/4             | 107325<br>25                            |
| 518-26                 | 1   | Recycle TMA Cooler<br>Flanges                                                     | G-40                                                | Special                      |                            | 1/16              |                |                   | 108146                                  |
| 518-30                 | 1   | Mixer & Settler<br>Agitator Opening                                               | G-40                                                | 22-1/2                       | 16                         | 1/8               | 8              | 7/8               | W101417<br>W101657<br>W102279<br>20-3/4 |
| 518-40                 | 1   | Waste Water Stripping<br>Top Flange<br>Manhole                                    | G-1<br>G-40                                         | 33-1/4<br>23-3/4             | 30<br>19-1/4               | 1/8<br>1/8        | 36<br>20       | 7/8<br>1-1/4      | 108579<br>34-1/8<br>25                  |
| 518-42                 | 1   | Water Stripping Condenser<br>Channel (2)<br>Floating T.S.<br>Top T.S. to Shell    | G-40<br>G-40<br>G-1                                 | 26-1/4<br>24-5/8<br>28-1/4   | 26-3/8<br>21-7/8<br>26-3/8 | 1/8<br>1/8<br>1/8 | 20<br>20<br>24 | 7/8<br>7/8<br>7/8 | 108492<br>29<br>23-3/8<br>29            |

DUP 0838029

Specification No. 289.

23.

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Plate No. | No. | Description                                                                                                           | Gasket Material<br>(DuPont Code No.)        | Gasket Dimensions                |                                      |                          | Bolt Holes           |                            |                                  | B.P.F.<br>No.    |
|------------------------|-----|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------|--------------------------------------|--------------------------|----------------------|----------------------------|----------------------------------|------------------|
|                        |     |                                                                                                                       |                                             | U.D.                             | I.D.                                 | Th.                      | No.                  | Size                       | B.C.                             |                  |
| 518-50                 |     | Benzene Stripper Col.<br>Top Flange<br>Manhole                                                                        | G-40<br>G-40                                | 39-3/8<br>23-3/4                 | 35-3/8<br>19-1/2                     | 1/8<br>1/8               | 36<br>20             | 1<br>1-1/4                 | 40-3/8<br>25                     | 108577           |
| 518-51                 |     | Benzene Stripper<br>Calandria<br>Channel (2)<br>T.S. to Shell<br>Floating Head                                        | S/S armored asbestos Special<br>G-1<br>G-40 | 34-3/8<br>28-3/8                 | 32-7/8<br>27-3/8                     | 1/8<br>1/8               | 36<br>36             | 7/8<br>7/8                 | 31<br>30-1/8                     | 108118           |
| 518-52                 | 1   | Benzene Stripper<br>Condenser<br>Channel (2)<br>T.S. to Shell<br>Floating Head                                        | G-40<br>G-1<br>G-40                         | 43-3/16<br>43-3/16<br>40-5/16    | 41-11/16<br>41-11/16<br>38-13/16     | 1/8<br>1/8<br>1/8        | 32<br>32             | 7/8<br>7/8                 | 44-3/8<br>44-3/8                 | 107716           |
| 518-53                 | 1   | Benzene Stripper<br>Condenser Decanter<br>Head Flange<br>Insp. Opening                                                | G-40<br>G-40                                | 80<br>13-1/2                     | 76<br>8                              | 1/8<br>1/8               | 48<br>6              | 3/4<br>5/8                 | 78<br>11-1/2                     | D81534<br>109273 |
| 518-54                 | 1   | Benzene Stripper<br>Vaporiser<br>Head to T.S.<br>T.S. to Shell<br>Channel<br>Manhole                                  | G-40<br>G-1<br>G-40<br>G-40                 | 36-1/4<br>37<br>33-5/8<br>23-7/8 | 34-3/4<br>35-3/4<br>31-5/8<br>21-1/2 | 1/8<br>1/8<br>1/8<br>1/8 | 28<br>40<br>32<br>20 | 3/4<br>7/8<br>3/4<br>3/4   | 37<br>37-3/4<br>34-3/8<br>24-5/8 | 108656           |
| 518-60                 | 1   | Benzene Purif. Col.<br>Top Flange<br>Manhole                                                                          | G-40<br>G-40                                | 54<br>27-1/2                     | 48<br>22-1/2                         | 1/8<br>1/8               | 48<br>24             | 1-1/8<br>1                 | 51<br>25                         | 108574           |
| 518-61                 |     | Benzene Purif.<br>Calandria<br>Fixed Channel<br>T.S. to Shell<br>Flat Channel to T.S.<br>Floating Channel<br>to Cover | G-40<br>G-1<br>G-40<br>G-40                 | 36-1/4<br>41-1/8<br>34<br>34     | 35-3/4<br>38-7/8<br>33<br>33         | 1/8<br>1/8<br>1/8<br>1/8 | 24<br>36<br>24<br>24 | 7/8<br>1-5/8<br>7/8<br>7/8 | 37<br>42-5/8<br>35-5/8<br>35-5/8 | 108285           |

DUP 0838030

24.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                                          | Gasket Material<br>(dupont Code No.)                | Gasket Dimensions            |                            | Bolt Holes        |                | B.P.F.<br>No.                        |
|------------------------|-----|--------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------|----------------------------|-------------------|----------------|--------------------------------------|
|                        |     |                                                                                      |                                                     | O.D.                         | I.D.                       | Th.               | No.            |                                      |
| 518-62                 |     | Benzene Purif. Condenser<br>Channel<br>T.S. to Shell<br>Floating Head                | G-40<br>G-1<br>G-40                                 | 34-1/4<br>34-1/4<br>30-1/2   | 32-1/4<br>32-3/4<br>29-1/2 | 1/8<br>1/8<br>1/8 | 24<br>24<br>28 | 108288<br>35<br>35<br>32-1/2         |
| 518-66                 |     | Benzene Purif. Decanter<br>Top Flange                                                | G-40                                                | 53-1/2                       | 48                         | 1/8               | 56             | D81506<br>51                         |
| 518-67                 | 1   | Benzene Cooler<br>Channel<br>T.S. to Shell<br>Floating Head                          | S/S armored asbestos<br>G-1<br>S/S armored asbestos | Special<br>14-1/2<br>Special | 13-1/4                     | 1/8               | 20             | 108287<br>15-1/8<br>3/4              |
| 518-79                 |     | Benzene Exhaustor<br>Bottoms Cooler<br>Channel (2)<br>T.S. to Shell<br>Floating T.S. | S/S armored asbestos<br>G-1<br>S/S armored asbestos | Special<br>14-1/8<br>12-3/16 | 12-7/8<br>11-5/16          | 1/8<br>1/8        | 16<br>16       | 107715<br>15-1/4<br>15-1/4           |
| 518-81                 | 1   | DNB Clrc. Flasher<br>Calandria<br>Channel (2)<br>Fixed T.S.<br>Floating Head         | S/S armored asbestos<br>G-40                        | Special<br>20-1/4<br>17      | 16-3/4<br>15-9/16          | 1/8<br>1/8        | 28<br>24       | 108204<br>21-1/4<br>17-3/4           |
| 518-82                 | 1   | DNB Flasher Condenser<br>Channel<br>T.S. to Shell<br>Floating Head                   | G-40<br>G-40<br>G-40                                | 44-3/4<br>44-3/4<br>37-3/8   | 42-1/2<br>42-1/2<br>35-1/2 | 1/8<br>1/8<br>1/8 | 40<br>40<br>36 | 108290<br>45-7/8<br>45-7/8<br>38-1/2 |
| 518-83                 | 1   | DNB Flasher Separator<br>Top Flange                                                  | G-40                                                | 36                           | 30                         | 1/8               | 36             | 108053<br>1-1/8<br>33                |
| 518-84                 | 1   | DNB Flasher Residue Tank<br>Flange                                                   | G-40                                                | 28-1/8                       | 23-3/4                     | 1/8               | 24             | 108205<br>7/8<br>26-5/8              |

DUP 0838031

25.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                                      | Gasket Material<br>(duPont Code No.)   | Gasket dimensions |         |     | Bolt Holes |       | B.P.F.<br>No. |
|------------------------|-----|----------------------------------------------------------------------------------|----------------------------------------|-------------------|---------|-----|------------|-------|---------------|
|                        |     |                                                                                  |                                        | U.D.              | L.D.    | Th. | No.        | Size  |               |
| 518-93                 | 1   | DNB Flasher Residue<br>Cooler<br>Channel (2)<br>Floating T.S.<br>to Shell        | S/S armored asbestos<br>Special<br>G-1 | 27-3/4            | 16-1/2  | 1/8 | 24         | 3/4   | 108083        |
| 518-100                | 1   | DNB Topping Column<br>Top Flange<br>Manhole                                      | G-40                                   | 90                | 83-1/2  | 1/8 | 81         | 1-1/8 | 108575        |
| 518-101                | 1   | DNB Topping Still<br>Calandria<br>Channel (2)<br>T.S. to Shell<br>Floating T.S.  | S/S armored asbestos<br>Special<br>G-1 | 29-7/16           | 28-1/16 | 1/8 | 36         | 3/4   | 108119        |
| 518-102                | 1   | DNB Topping Still<br>Condenser<br>Channel<br>T.S. to Shell<br>Floating Head      | G-40                                   | 44-1/4            | 42-1/2  | 1/8 | 40         | 1-1/8 | 108289        |
| 518-110                | 1   | DNB Refining Column<br>Top Flange<br>Manhole                                     | G-40                                   | 108               | 101-1/4 | 1/8 | 100        | 1-1/4 | 108576        |
| 518-111                | 1   | DNB Refining Still<br>Calandria<br>Channel (2)<br>T.S. to Shell<br>Floating Head | S/S armored asbestos<br>Special<br>G-1 | 34-3/8            | 32-7/8  | 1/8 | 36         | 7/8   | 108118        |
| 518-112                | 1   | DNB Refining Still<br>Condenser<br>Channel (2)<br>T.S. to Shell<br>Floating Head | G-40                                   | 50-5/8            | 48-5/8  | 1/8 | 60         | 7/8   | 107713        |

Equipment Gasket Specs. - Victoria

Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                                                           | Gasket Material<br>(duPont Code No.)                                             | Gasket Dimensions          |                            |                    | Bolt Holes          |                        |                            | B.P.F.<br>No. |
|------------------------|-----|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------|----------------------------|--------------------|---------------------|------------------------|----------------------------|---------------|
|                        |     |                                                                                                       |                                                                                  | O.D.                       | I.D.                       | Th.                | No.                 | Size                   | B.C.                       |               |
| 518-119                | 1   | Forshots & Residue<br>Storage Tank<br>Manhole<br>Heating Coil<br>to Tank<br>Heating Coil<br>to Flange | G-40<br>G-40<br>G-1                                                              | 27-1/2<br>10-7/8<br>8-5/8  | 22-1/2<br>8<br>6           | 1/8<br>1/8<br>1/16 | 24<br>8<br>8        | 1<br>7/8<br>7/8        | 25<br>11-3/4<br>9-1/2      | 108206        |
| 518-120                | 1   | Residue Mixer<br>Settler<br>Agitator Opening                                                          | G-1                                                                              | 22-1/2                     | 18                         | 1/8                | 8                   | 7/8                    | 20-3/4                     |               |
| 518-124                | 1   | Extract-Cooler<br>Channel (2)<br>Floating Head<br>T.S. to Shell                                       | S/S armored asbestos<br>S/S armored asbestos<br>Special<br>Special<br>G-1        |                            |                            |                    |                     |                        |                            | 108116        |
| 518-150                | 1   | Forshots Concentrator<br>Column<br>Top Flange<br>Manhole                                              | G-40<br>G-40                                                                     | 78<br>27-1/2               | 71-1/2<br>22-1/2           | 1/8<br>1/8         | 72<br>24            | 1-3/8<br>1             | 75<br>25                   | 108580        |
| 518-151                | 1   | Forshots Calandria<br>Channel<br>T.S. to Shell<br>Floating Head                                       | S/S armored asbestos<br>S/S armored asbestos<br>Special<br>Special<br>G-1<br>G-1 | 25-1/8<br>23-5/8<br>19-5/8 | 1/8<br>1/8                 | 32<br>28<br>28     | 3/4<br>1-1/8<br>3/4 | 24-5/8<br>26-1/8<br>22 |                            | 108286        |
| 518-152                | 1   | Forshots Condenser<br>Channel<br>Fixed T.S. to Shell<br>Floating Head                                 | G-40<br>G-1<br>G-40                                                              | 38-3/8<br>38-3/8<br>34-1/2 | 36-7/8<br>36-7/8<br>33-1/2 | 1/8<br>1/8<br>1/8  | 32<br>24            | 7/8<br>7/8<br>3/4      | 39-1/8<br>39-1/8<br>38-3/4 | 108284        |
| 518-162                | 1   | Condensate Flash Tank<br>Manhole                                                                      | G-1                                                                              | 27-1/2                     | 22-1/2                     | 1/8                | 24                  | 1                      | 25                         | 1082291       |
| 518-164                | 1   | Condensate Flash Tank<br>Manhole                                                                      | G-1                                                                              | 27-1/2                     | 22-1/2                     | 1/8                | 24                  | 1                      | 25                         | 1092259       |
| 518-175                | 1   | Vent Sump Tank<br>Top Flange                                                                          | G-40                                                                             | 27                         | 24                         | 1/8                | 16                  | 3/4                    | 25-3/4                     | 1082282       |

## Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                                                                 | Gasket Material<br>(duPont Code No.) | Gasket Dimensions                                |                                                     |                                 | Bolt Holes                 |                                           | B.P.F.<br>No.                              |        |
|------------------------|-----|---------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------|----------------------------|-------------------------------------------|--------------------------------------------|--------|
|                        |     |                                                                                             |                                      | O.D.                                             | I.D.                                                | Th.                             | No.                        | Size                                      |                                            | B.C.   |
| 519-2                  | 2   | Crude DNB Stg. Tanks<br>22" Manhole                                                         | G-40                                 | 27-1/2                                           | 22-1/2                                              | 1/8                             | 24                         | 1                                         | 25                                         | 107005 |
| 519-3                  | 2   | Refined DNB Stg. Tank<br>22" Manhole                                                        | G-40                                 | 27-1/2                                           | 22-1/2                                              | 1/8                             | 24                         | 1                                         | 25                                         | 107005 |
| 519-5                  | 1   | TMA Stg. Tank<br>20" Manhole                                                                | G-1                                  | 23-3/4                                           | 20-1/4                                              | 1/8                             | 20                         | 1-1/4                                     | 25                                         | 106125 |
| 519-6                  | 1   | Reworked Benzene<br>Stg. Tank<br>22" Manhole                                                | G-40                                 | 27-1/2                                           | 22-1/2                                              | 1/8                             | 24                         | 1                                         | 25                                         | 107005 |
| 519-7                  | 1   | Waste Organic Stg. Tank<br>22" Manhole<br>Heater                                            | G-40<br>G-40                         | 27-1/2<br>11                                     | 22-1/2<br>8-3/4                                     | 1/8<br>1/16                     | 24<br>8                    | 1<br>7/8                                  | 25<br>11-3/4                               | 106919 |
| 519-8                  | 1   | Waste Benzene Stg. Tank<br>Manhole<br>Heater                                                | G-40<br>G-40                         | 27-1/2<br>11                                     | 22-1/2<br>8-3/4                                     | 1/8<br>1/16                     | 24<br>8                    | 1<br>7/8                                  | 25<br>11-3/4                               | 107465 |
| 520-6                  | 1   | Starting Air Receiver<br>Manhole                                                            | G-1                                  | 25-5/8                                           | 20                                                  | 1/8                             | 24                         | 1-3/8                                     | 27                                         | 106279 |
| 520-12                 | 1   | Preheater<br>Channel<br>Manhole<br>Channel-Shell Side<br>Channel-Tube Side<br>Floating Head | G-1<br>G-1<br>G-1<br>G-1<br>G-1      | 43-3/8<br>23-3/4<br>38-7/16<br>43-3/8<br>32-1/16 | 34-5/16<br>20-1/4<br>37-1/16<br>34-5/16<br>30-15/16 | 1/8<br>1/8<br>1/8<br>1/8<br>1/8 | 36<br>20<br>36<br>36<br>36 | 1-5/8<br>1-1/4<br>1-5/8<br>1-5/8<br>1-5/8 | 40-3/8<br>25<br>40-3/8<br>40-3/8<br>40-3/8 | 105765 |
| 520-14                 | 1   | Cyclone Separator<br>& Feed Tank<br>22" Manhole                                             | G-1                                  | 27-1/2                                           | 22-1/2                                              | 1/8                             | 24                         | 1                                         | 25                                         | 106220 |
| 520-16                 | 1   | Vaporizer<br>Manhole                                                                        | G-40                                 | 27-1/2                                           | 22-1/2                                              | 1/8                             | 24                         | 1                                         | 25                                         | 106405 |

DUP 0838034

28.

Specification No. 2891

Equipment Gasket Specs. - Victoria Project 6875 (All dimensions given in inches)

| Equipment Piece No. | No. | Description                                                              | Gasket Material (dupont Code No.)              | Gasket Dimensions                      |                                          |                             | Bolt Holes           |                                |                              | B.P.F. No. |
|---------------------|-----|--------------------------------------------------------------------------|------------------------------------------------|----------------------------------------|------------------------------------------|-----------------------------|----------------------|--------------------------------|------------------------------|------------|
|                     |     |                                                                          |                                                | O.D.                                   | I.D.                                     | Th.                         | No.                  | Size                           | B.C.                         |            |
| 520-20              | 1   | DNB Preheater Channel Tube Sheet Floating Head                           | Armored Asbestos Spiral Wound Armored Asbestos | Special                                |                                          |                             | 24                   | 7/8                            | 23-1/4                       | 106383     |
| 520-22              | 1   | DNB Purge Cooler Channel                                                 | G-1                                            |                                        |                                          |                             |                      |                                |                              | 107906     |
| 520-24              | 1   | Superheater Fixed Head Manhole Floating Head T&S. to Shell               | G-1<br>G-1<br>G-1<br>G-1                       | 50-5/8<br>23-3/4<br>20-1/4             | 47-5/8<br>19-1/4<br>17-1/4<br>42         | 1/16<br>1/8<br>1/8<br>1/8   | 48<br>20<br>16<br>48 | 1-1/8<br>1-1/4<br>1-1/8<br>7/8 | 52<br>25<br>21-1/4<br>45-1/8 | 105057     |
| 520-26              | 2   | Converter Manhole                                                        | G-1                                            | 27-1/2                                 | 22-1/2                                   | 1/8                         | 24                   | 1                              | 25                           | 106411     |
| 520-28              | 1   | Gas Cooler Shell to Fixed Hd. Channel to Fixed Hd. Floating Head Manhole | G-1<br>G-1<br>G-1<br>G-1                       | 37-7/16<br>37-7/16<br>35-1/8<br>23-3/4 | 36-11/16<br>36-11/16<br>34-3/8<br>20-1/4 | 1/16<br>1/16<br>1/16<br>1/8 | 36<br>36<br>1<br>20  | 1<br>1<br>1-1/4                | 39-1/8<br>39-1/8<br>25       | 105764     |
| 520-30              | 1   | Mist Scrubber 22" Manhole Head                                           | G-1<br>G-1                                     | 27-1/2<br>121                          | 22-1/2<br>114                            | 1/8<br>1/8                  | 24<br>108            | 1<br>1-3/8                     | 25<br>118                    | 10626      |
| 520-50              | 1   | Topping Column 22" Manhole Head                                          | G-1<br>G-1                                     | 27-1/2<br>91                           | 22-1/2<br>84                             | 1/8<br>1/8                  | 24<br>84             | 1<br>1-1/8                     | 25<br>99                     | 106286     |
| 520-52              | 1   | Condenser T.S. to Shell Channel Floating Head                            | G-1<br>G-1<br>G-1                              | 43-13/16<br>43-13/16<br>40-3/8         | 42-5/16<br>42-5/16<br>39                 | 1/8<br>1/8<br>1/8           | 40<br>40<br>40       | 1-1/8<br>1-1/8<br>1-1/8        | 45-1/4<br>45-1/4<br>45-1/4   | 105756     |

DUP 0838035

29.

Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                            | Gasket Material<br>(duPont Code No.)        | Gasket Dimensions          |                    |                   | Bolt Holes     |                         |                            | B.P.F.<br>No. |
|------------------------|-----|--------------------------------------------------------|---------------------------------------------|----------------------------|--------------------|-------------------|----------------|-------------------------|----------------------------|---------------|
|                        |     |                                                        |                                             | O.D.                       | I.D.               | Th.               | No.            | Size                    | R.C.                       |               |
| 520-58                 | 1   | Calandria<br>Channel<br>T.S. to Shell<br>Floating Head | S/S armored asbestos<br>Spiral wound<br>G-1 | 22-9/16                    | 21-9/16            | 1/8               | 24<br>32       | 7/8<br>1-1/4            | 25<br>29-3/4               | 106726        |
| 520-68                 | 1   | Refining Column<br>Head<br>Manhole                     | G-1<br>G-1                                  | 103<br>27-1/2              | 96<br>22-1/2       | 1/8<br>1/8        | 96<br>24       | 1-1/4<br>1              | 100<br>25                  | 106286        |
| 520-70                 | 1   | Condenser                                              | G-1<br>G-1<br>G-1                           | 59-1/4<br>54-3/4<br>50-7/8 | 52<br>52-3/4<br>44 | 1/8<br>1/8<br>1/8 | 48<br>48<br>44 | 1-3/8<br>1-3/8<br>1-1/4 | 56-1/4<br>56-1/4<br>47-7/8 | 106120        |
| 520-78                 | 1   | Calandria<br>Channel<br>T.S. to Shell<br>Floating Head | Armored Asbestos<br>Spiral wound<br>G-1     | Special<br>22-9/16         | 21-9/16            | 1/8<br>1/8        | 24<br>32       | 7/8<br>1-1/4            | 25<br>29-3/4               | 106726        |
| 520-82                 | 1   | Tails Cooler<br>Flanges                                | G-1                                         |                            |                    | 1/8               | 12             | 5/8                     |                            | 106484        |
| 520-88                 | 1   | Calandria<br>Channel<br>T.S. to Shell<br>Floating Head | Armored Asbestos<br>Spiral wound<br>G-1     | Special<br>22-9/16         | 21-9/16            | 1/8<br>1/8        | 24<br>32       | 7/8<br>1-1/4            | 25<br>29-3/4               | 106726        |
| 520-90                 | 1   | Batch Column<br>22" Manhole<br>Head                    | G-1<br>G-1                                  | 27-1/2<br>84               | 22-1/2<br>78       | 1/8<br>1/8        | 24<br>76       | 1<br>1-1/8              | 25<br>82                   | 106286        |
| 520-92                 | 1   | Condenser<br>Fixed T.S.<br>Channel                     | G-1<br>G-1                                  | 43-13/16<br>Special        | 42-5/16            | 1/8<br>1/8        | 40             | 1-1/8                   | 45-1/4                     | 105756        |
| 521-1                  | 1   | Batch Distillate Strg.<br>22" Manhole                  |                                             | 27-1/2                     | 22-1/2             | 1/8               | 24             | 1                       | 25                         | 105561        |

DUP 0838036

30.

## Specification No. 2891

Equipment Gasket Specs. - Victoria

Project 6875

(All dimensions given in inches)

| Equipment<br>Piece No. | No. | Description                                           | Gasket Material<br>(duPont Code No.) | Gasket Dimensions |                   |              | Bolt Holes |                |                    | B.P.F.<br>No. |
|------------------------|-----|-------------------------------------------------------|--------------------------------------|-------------------|-------------------|--------------|------------|----------------|--------------------|---------------|
|                        |     |                                                       |                                      | O.D.              | I.D.              | Th.          | No.        | Size           | B.C.               |               |
| 521-2                  | 2   | Crude ADN Stg. Tank<br>22" Manhole                    | G-1                                  | 27-1/2            | 22-1/2            | 1/8          | 24         | 1              | 25                 | 105585        |
| 521-3                  | 2   | Refined ADN Holdup Tank<br>22" Manhole                | G-1                                  | 27-1/2            | 22-1/2            | 1/8          | 24         | 1              | 25                 | 105585        |
| 521-4                  | 1   | Refined Column<br>Tails Storage Tank<br>22" Manhole   | G-1                                  | 27-1/2            | 22-1/2            | 1/8          | 24         | 1              | 25                 | 1055          |
| 521-5                  | 1   | Low Boiler Storage Tank<br>22" Manhole                | G-1                                  | 27-1/2            | 22-1/2            | 1/8          | 24         | 1              | 25                 | 105581        |
| 524-2                  | 2   | Propane Condensers<br>Heads                           | S/S armored asbestos Special         |                   |                   |              | 40         | 1              | 43-3/4             | 106720        |
| 524-10                 | 2   | Circulation Water Coolers<br>Head<br>Channel to Shell | G-1<br>G-1                           | 21-3/8<br>26-5/8  | 20-7/16<br>23-5/8 | 1/16<br>1/16 | 20<br>24   | 7/8<br>7/8     | 20-11/16<br>25-1/8 | 106142        |
| 524-11                 | 1   | Vent Tank<br>Manhole                                  | G-1                                  | 27-1/2            | 22-1/2            | 1/8          | 24         | 1              | 25                 | 105886        |
| 524-12                 | 1   | Horiz. Surge Tank -<br>20" Manhole                    | G-1                                  | 25-3/4            | 20-1/4            | 1/8          | 24         | 1-3/8          | 27                 | 1072          |
| 524-14                 | 2   | Vertical Steel Tank<br>17" Nozzle<br>20" Nozzle       | G-1<br>G-1                           | 25-3/4<br>25-3/4  | 16-9/16<br>20     | 1/8<br>1/8   | 24<br>24   | 1-3/8<br>1-3/8 | 27<br>27           | D61231        |
| 524-18                 | 1   | Air Receiver<br>20" Manhole                           | G-1                                  | 23-3/4            | 20                | 1/8          | 20         | 1-3/8          | 25                 | 106303        |
| 524-19                 | 1   | Starting Air Receiver<br>20" Manhole                  | G-1                                  | 25-3/4            | 20                | 1/8          | 24         | 1-3/8          | 27                 | 106279        |
| 527-4                  | 1   | Acid Cooler<br>Channel-Special                        | G-1                                  |                   |                   | 1/16         |            |                |                    | 106763        |

**EXPANSION JOINT PACKING SPECIFICATIONS**  
**VICTORIA PLANT - PROJECT 6875**  
 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Equipment Service         | Packing<br>Specifications | Packing<br>Size | No.<br>Rings | Shaft<br>O.D. | Gland<br>I.D. | B.P.F.<br>No.    |
|------------------------|-----|---------------------------|---------------------------|-----------------|--------------|---------------|---------------|------------------|
| 506-1.11               | 2   | Gas Precoolers            | Braided Copper<br>R-13X   | 1/2             | 1            | 8             | 9             | 104890<br>104890 |
| 506-1.17               | 2   | Gas Aftercoolers          | Braided Copper<br>R-13X   | 3/8             | 1            | 6             | 6-3/4         | 104890<br>104890 |
| 506-1.21               | 2   | MEA Coolers               | Braided Copper<br>R-13X   | 3/8             | 1            | 6             | 6-3/4         | 104890<br>104890 |
| 506-1.25               | 2   | MEA Heat Exchangers       | Braided Copper<br>R-13X   | 3/8             | 1            | 6             | 6-3/4         | 104890<br>104890 |
| 506-1.5                | 2   | CO <sub>2</sub> Condenser | Braided Copper<br>R-13X   | 3/8             | 1            | 8             | 8-3/4         | 104890<br>104890 |
| 512-30                 | 1   | Preheater                 | Braided Copper<br>R-13X   | 5/8             | 1            | 7-1/8         | 8-7/16        | 105832           |
| 512-51                 | 1   | Calandria                 | Braided Copper<br>R-13X   | 1/2             | 1            | 21-1/2        | 22-9/16       | 106036           |
| 512-68                 | 1   | Butadiene Preheater       | Braided Copper<br>R-13X   | 5/8             | 1            | 14-7/16       | 15-7/8        | 105832           |
| 512-84                 | 1   | Partial Condenser         | Braided Copper<br>R-13X   | 1/2             | 1            | 12-7/8        | 13-15/16      | 106035           |
| 512-88                 | 1   | Products Condenser        | Braided Copper<br>R-13X   | 1/2             | 1            | 20-15/16      | 22            | 106819           |
| 512-93                 | 1   | Crude DOB Cooler          | Braided Copper<br>R-13X   | 1/2             | 1            | 9-7/8         | 10-11/16      | 106034           |

DUP 0838038

32.

Specification No. 2891

Expansion Joint Packing Specs. - Victoria - Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Equipment Service             | Packing<br>Specifications | Packing<br>Size | No.<br>Rings | Shaft<br>O.D.      | Gland<br>I.D.        | B.P.F.<br>No.    |
|------------------------|-----|-------------------------------|---------------------------|-----------------|--------------|--------------------|----------------------|------------------|
| 512-120                | 1   | Recycle Cooler                | Braided Copper<br>R-13X   | 1/2             | 6            | 14-7/8<br>14-7/8   | 15-15/16<br>15-15/16 | 106033           |
| 512-152                | 1   | Topping Still Condenser       | Braided Copper<br>R-13X   | 1/2             | 6            | 32-3/8<br>32-3/8   | 33-7/16<br>33-7/16   | 106032           |
| 512-161                | 1   | Refining Still<br>Calandria   | Braided Copper<br>R-13X   | 1/2             | 5            | 28.31<br>28.31     | 29.31<br>29.31       | 106764           |
| 512-162                | 1   | Refining Still                | Copper Braid<br>R-13X     | 1/2             | 6            | 32-3/8<br>32-3/8   | 33-7/16<br>33-7/16   | 106032           |
| 512-164                | 1   | Tails Cooler                  | Braided Copper<br>R-13X   | 1/2             | 5            | 10-1/8<br>10-1/8   | 11-1/8<br>11-1/8     | 106772           |
| 512-169                | 1   | Refined DGB Cooler            | Braided Copper<br>R-13X   | 1/2             | 5            | 10-1/8<br>10-1/8   | 11-1/8<br>11-1/8     | 106997           |
| 512-182                | 1   | Vertical Condenser            | Braided Copper<br>R-13X   | 1/2             | 6            | 32-3/8<br>32-3/8   | 33-7/16<br>33-7/16   | 106032           |
| 514-13                 | 1   | Vertical Cooler               | Braided Copper<br>R-13X   | 1/2             | 6            | 32-3/16<br>32-3/16 | 33-1/4<br>33-1/4     | 105610           |
| 514-23                 | 1   | Crude Cooler                  | Braided Copper<br>R-13X   | 1/2             | 6            | 32-3/16<br>32-3/16 | 33-1/4<br>33-1/4     | 105609<br>105611 |
| 514-38                 | 1   | Refined Cooler                | Braided Copper<br>R-13X   | 1/2             | 5            | 12-3/16<br>12-3/16 | 13-1/4<br>13-1/4     | 105604           |
| 516-75                 | 1   | Absorption Solution<br>Cooler | Braided Copper<br>R-13X   | 1/2             | 5            | 27<br>27           | 28<br>28             | 106962           |
| 516-79                 | 1   | Recycled MACN Cooler          | Braided Copper<br>R-13X   | 1/2             | 5            | 7-13/16<br>7-13/16 | 8-7/8<br>8-7/8       | 107289           |

## Specification No. 2891

Expansion Joint Packings Specs. - Victoria - Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Equipment Service                 | Packing<br>Specifications | Packing<br>Size | No.<br>Rings | Shaft<br>O.D.        | Gland<br>I.D.        | B.P.F.<br>No. |
|------------------------|-----|-----------------------------------|---------------------------|-----------------|--------------|----------------------|----------------------|---------------|
| 518-2                  | 1   | TMA Reactor Heater                | Braided Copper<br>R-13X   | 5/8             | 1            | 14-1/4<br>14-1/4     | 15-9/16<br>15-9/16   |               |
| 518-9                  | 1   | Flash Condenser                   | Braided Copper<br>R-13X   | 1/2             | 1            | 17-5/16<br>17-5/16   | 18-7/16<br>18-7/16   | 107717        |
| 518-11                 | 1   | TMA Column Calandria              | Braided Copper<br>R-13X   | 1/2             | 1            | 21-15/16<br>21-15/16 | 23<br>23             | 108117        |
| 518-12                 | 1   | TMA Stripping Still<br>Condenser  | Braided Copper<br>R-13X   | 1/2             | 1            | 34-11/16<br>34-11/16 | 35-13/16<br>35-13/16 | 108085        |
| 518-14                 | 2   | TMA Stripper Condenser            | Braided Copper<br>R-13X   | 1/2             | 1            | 13-7/16<br>13-7/16   | 14-1/2<br>14-1/2     | 107714        |
| 518-22                 | 1   | Recovered TMA Condenser           | Braided Copper<br>R-13X   | 1/2             | 1            | 8-1/16<br>8-1/16     | 9-1/8<br>9-1/8       | 108491        |
| 518-42                 | 1   | Water Stripper Column             |                           |                 |              |                      |                      | 108492        |
| 518-51                 | 1   | Benzene Stripper<br>Calandria     | Braided Copper<br>R-13X   | 5/8             | 1            | 28-3/8<br>28-3/8     | 29-11/16<br>29-11/16 | 108116        |
| 518-52                 | 1   | Benzene Stripper<br>Condenser     | Braided Copper<br>R-13X   | 1/2             | 1            | 40-5/16<br>40-5/16   | 41-3/8<br>41-3/8     | 107716        |
| 518-54                 | 1   | Benzene Stripper<br>Vaporizer     | Braided Copper<br>R-13X   | 1/2             | 1            | 32-5/8<br>32-5/8     | 33-11/16<br>33-11/16 | 108656        |
| 518-61                 | 1   | Benzene Purification<br>Calandria | Braided Copper<br>R-13X   | 5/8             | 1            | 34<br>34             | 35-5/16<br>35-5/16   | 108285        |
| 518-62                 | 1   | Benzene Purification<br>Condenser | Braided Copper<br>R-13X   | 1/2             | 1            | 30-1/2<br>30-1/2     | 31-1/2<br>31-1/2     |               |
| 518-67                 | 1   | Benzene Cooler                    | Braided Copper<br>R-13X   | 1/2             | 1            | 11-15/16<br>11-15/16 | 13<br>13             |               |

Specification No. 2891

## Expansion Joint Packing Specs. - Victoria - Project 6875 (All dimensions given in inches)

| Equipment Piece No. No. | Equipment Service                | Packing Specifications | Packing Size | no. Rings | Shaft O.D.         | Gland I.D.           | B.P.F. No. |
|-------------------------|----------------------------------|------------------------|--------------|-----------|--------------------|----------------------|------------|
| 518-79                  | 1 Benzene Exhaust Bottoms Cooler | Braided Copper R-13X   | 1/2          | 1         | 12-3/16<br>12-3/16 | 13-1/4<br>13-1/4     | 107715     |
| 518-81                  | 1 DNB Circ. Flasher Calandria    | Braided Copper R-13X   | 5/8          | 1         | 16-9/16<br>16-9/16 | 17-13/16<br>17-13/16 | 108204     |
| 518-82                  | 1 DNB Flasher Condenser          | Braided Copper R-13X   | 1/2          | 1         | 40-5/8<br>40-5/8   | 41-5/8<br>41-5/8     | 108290     |
| 518-93                  | 1 Flasher Residue Cooler         | Braided Copper R-13X   | 1/2          | 1         | 14-3/4<br>14-3/4   | 15-13/16<br>15-13/16 | 108083     |
| 518-101                 | 1 DNB Topping Still Condenser    | Braided Copper R-13X   | 5/8          | 1         | 24<br>24           | 25-5/16<br>25-5/16   | 108119     |
| 518-102                 | 1 DNB Topping Still Condenser    | Braided Copper R-13X   | 1/2          | 1         | 40-5/8<br>40-5/8   | 41-5/8<br>41-5/8     | 108289     |
| 518-111                 | 1 DNB Refining Column            | Garlock 5836           | 1/2          | 3         | 100                | 101                  | 108118     |
| 518-111                 | 1 DNB Refining Still Calandria   | Braided Copper R-13X   | 5/8          | 1         | 28-3/8<br>28-3/8   | 29-11/16<br>29-11/16 | 108118     |
| 518-112                 | 1 DNB Refining Still Condenser   | Braided Copper R-13X   | 1/2          | 1         | 47-7/16<br>47-7/16 | 48-1/2<br>48-1/2     | 107715     |
| 518-124                 | 1 Extract Cooler                 | Braided Copper R-13X   | 1/2          | 1         | 11-7/8<br>11-7/8   | 13<br>13             | 108116     |
| 518-151                 | 1 Foreshots Calandria            | Braided Copper R-13X   | 5/8          | 1         |                    |                      |            |
| 518-152                 | 1 Foreshots Condenser            | Braided Copper R-13X   | 1/2          | 1         | 34-1/2<br>34-1/2   | 35-9/16<br>35-9/16   |            |

DUP 0838041

35.

Specification No. 2891

Expansion Joint Packing Specs. - Victoria - Project 6875 (All dimensions given in inches)

| Equipment<br>Piece No. | No. | Equipment Service           | Packing<br>Specifications | Packing<br>Size | No.<br>Rings | Shaft<br>O.D.        | Gland<br>I.D.      | B.P.F.<br>No. |
|------------------------|-----|-----------------------------|---------------------------|-----------------|--------------|----------------------|--------------------|---------------|
| 520-12                 | 1   | Preheater                   | Braided Copper<br>R-13X   |                 | 1<br>7       | 32-1/8<br>32-1/8     | 33-7/16<br>33-7/16 | 105765        |
| 520-20                 | 1   | DNB Preheater               | Braided Copper<br>R-13X   | 5/8<br>5/8      | 1<br>7       | 18-3/16<br>18-3/16   | 19-1/2<br>19-1/2   | 106383        |
| 520-24                 | 1   | Superheater                 | Braided Copper<br>R-13X   | 5/8<br>5/8      | 1<br>5       | 19-1/4<br>19-1/4     |                    | 105057        |
| 520-28                 | 1   | Gas Cooler                  | Braided Copper<br>R-13X   | 1/2<br>1/2      | 1<br>5       | 35-3/16<br>35-3/16   | 36-5/16<br>36-5/16 | 105764        |
| 520-52                 | 1   | Condenser                   | Braided Copper<br>R-13X   | 1/2<br>1/2      | 1<br>5       |                      |                    | 105756        |
| 520-58                 | 1   | Calandria                   | Braided Copper<br>R-13X   | 5/8<br>5/8      | 1<br>7       | 22-13/16<br>22-13/16 | 24-1/8<br>24-1/8   | 106726        |
| 520-70                 | 1   | Condenser                   | Braided Copper<br>R-13X   | 1/2<br>1/2      | 1<br>5       | 50.9<br>50.9         | 51.9<br>51.9       | 106120        |
| 520-78                 | 1   | Calandria                   | Braided Copper<br>R-13X   | 5/8<br>5/8      | 1<br>7       | 22-13/16<br>22-13/16 | 24-1/8<br>24-1/8   | 106726        |
| 520-88                 | 1   | Calandria                   | Braided Copper<br>R-13X   | 5/8<br>5/8      | 1<br>7       | 22-13/16<br>22-13/16 | 24-1/8<br>24-1/8   | 106726        |
| 520-92                 | 1   | Condenser                   | Braided Copper<br>R-13X   | 1/2<br>1/2      | 1<br>5       |                      |                    | 105756        |
| 524-10                 | 2   | Circulation Water<br>Cooler | Braided Copper<br>R-13X   | 1/2<br>1/2      | 1<br>5       | 21-1/2<br>21-1/2     | 22-1/2<br>22-1/2   | 106142        |

DUP 0838042

Specification No. 2891

36.

**PACKING & GASKET SPECIFICATIONS  
VICTORIA PLANT - PROJECT 6875**

**SHAFT PACKING SPECIFICATIONS**

| Equipment<br>Piece No. | No. | Equipment Service    | Packing Material | Packing<br>Size | No. of<br>Rings | Shaft<br>O.D. | Gland<br>I.D. | B.P.F.<br>No.    |
|------------------------|-----|----------------------|------------------|-----------------|-----------------|---------------|---------------|------------------|
| 101-804                | 2   | Boiler Feed Pumps    | R-3W             |                 |                 |               |               | 107507           |
| 101-828                | 2   | Centrifugal Pump     | Cameron Seal     |                 |                 |               |               | 107081           |
| 102-808                | 1   | Pump                 | R-4B             | 3/8             | 6               | 1-1/4         | 2             | 1092             |
| 102-801.3              | 1   | Chemical Pump        | R-4B             | 1/4             | 8               | 7/16          | 1-1/8         |                  |
| 103-801.1              | 1   | #1 Well Pump         | R-3              |                 |                 |               |               | 105693           |
| 103-801.3              | 1   | #1 Booster Pump      | R-3              |                 | 5               |               |               | 105559           |
| 103-802.1              | 1   | #2 Well Pump         | R-3              |                 |                 |               |               | 105693           |
| 103-802.3              | 1   | #2 Booster Pump      | R-3              |                 |                 |               |               | 105559           |
| 104-801                | 2   | River Water Pump     | R-3              |                 | 4               |               |               | 105550           |
| 105-801                | 2   | Pumps                | R-3              |                 |                 |               |               | 105536<br>104822 |
| 108-801                | 2   | Pire Pumps           | R-3              |                 |                 |               |               | 107690<br>105955 |
| 108-808                | 1   | Calgon Pump          | R-4B             | 1/4             | 8               | 7/8           | 1-3/8         | 106417           |
| 307-1                  | 2   | Vertical Pump-Sewage | R-3              |                 |                 |               |               | 104562           |
| 310-3.2                | 1   | Tank Agitator        | R-15             | 1/2             | 6               | 2-7/8         | 3-15/16       | 106918           |
| 310-4.2                | 1   | Tank Agitator        | R-15             | 1/2             | 6               | 2-7/8         | 3-15/16       | 106918           |

## Packing &amp; Gasket Specs. - Victoria - Project 6875 Shaft Packing Specs.

| Equipment<br>Piece No. | No. | Equipment                           | Packing Material                                                         | Packing<br>Size | No. of<br>Rings | Shaft<br>O.D. | Gland<br>I.D. | B.P.F.<br>No. |
|------------------------|-----|-------------------------------------|--------------------------------------------------------------------------|-----------------|-----------------|---------------|---------------|---------------|
| 311-9                  | 1   | Well Injection Pump                 | Chevron as Garlock<br>430 - 1-17/32 deep                                 |                 | 4               | 2-3/4         | 3-3/4         | 107670        |
| 311-19.1               | 1   | Pipeline Mixer Agitator             | R-4B                                                                     | 3/8             | 8               | 1             | 1-3/4         | 107103        |
| 314-8                  | 1   | H <sub>2</sub> SO <sub>4</sub> Pump | R-4B                                                                     |                 | 8               |               |               | 106003        |
| 317-1                  | 1   | Centrifugal Pump                    | R-3                                                                      |                 |                 |               |               |               |
| 506-1                  | 2   | Turbo Blowers                       |                                                                          |                 |                 |               |               | 104890        |
| 506-1.23               | 2   | MEA Booster Pumps                   | Cameron Seal                                                             |                 |                 |               |               | 104890        |
| 506-1.27               | 2   | MEA Circulating Pumps               | Cameron Seal                                                             |                 |                 |               |               | 104890        |
| 506-3                  | 2   | 100 DPM Compressors                 | France Packing<br>Type 456-Dwg. 20269<br>for 9" stroke, ..<br>1-3/4" rod |                 |                 |               |               | 105947        |
| 506-10                 | 1   | Gas Blower                          | R-3                                                                      | 1/4             | 5               | 11/16         | 1-3/16        | 106768        |
| 508-1                  | 1   | Unloading Compressor                | Worthington Shaft<br>Seal for Model URAE-<br>L-53517 compressor          |                 |                 |               |               | 105233        |
| 510-1                  | 1   | Butadiene Unloading                 | France Packing<br>Type 456-Dwg. 20264<br>for 7" stroke,<br>1-3/8" rod    |                 |                 |               |               | 105232        |
| 511-1                  | 2   | Ammonia Unloading                   | Worthington Shaft<br>Seal for Model<br>URAE-L-53517                      |                 |                 |               |               | 105233        |

## Specification No. 2891

## Packing &amp; Gasket Specs. - Victoria - Project 6875 Shaft Packing Specs.

| Equipment Piece No. | No. | Equipment                      | Packing Material                                              | Packing Size | No. of Rings | Shaft O.D. | Gland I.D. | B.P.F. No.       |
|---------------------|-----|--------------------------------|---------------------------------------------------------------|--------------|--------------|------------|------------|------------------|
| 511-3               | 2   | Inert Gas Compressor           | France Packing-Type 456-Dwg. 20264 for 9" stroke, 1-3/4" rod  |              |              |            |            | 105234           |
| 512-63              | 1   | Butadiene Vent Compressor      | France Packing-Type 407-4-Dwg. A554 for 9" stroke, 1-3/4" rod |              |              |            |            | 106037           |
| 514-6               | 1   | 3-stage Centrifugal Air Blower | Special Labyrinth Seals                                       |              |              |            |            | 105372           |
| 514-35              | 1   | Single-stage Steam Turbine     | Special Carbon Rings                                          |              |              |            |            | 106291           |
|                     | 2   | Clark Vacuum Pump              | France Packing Clark Part No. 59 for SLR-VN-2219 compressor   |              |              |            |            | 105865           |
| 514-41              | 2   | Agitator Assembly              | Crane Chemlon 704 R-4B S-9 Separators                         |              | 1<br>6<br>9  |            |            | 106275<br>W99937 |
| 514-43              | 2   | Air Blowers                    | R-3                                                           | 1/4          | 5            | 11/16      | 1-3/16     | 105922           |
| 514-44              | 1   | Air Compressor                 | France Packing Type 407-3-Dwg. A-578 7" stroke, 1-3/8" rod    |              |              |            |            | 106414           |
| 516-5               | 4   | Reactors-glass-lined           | Hastelloy "C" R-15                                            | 1/4          | 1            | 2-7/16     | 3-1/16     | D80860           |
| 516-8.1             | 1   | Agitator                       |                                                               |              |              |            |            |                  |

## Specification No. 2891

## Packing &amp; Gasket Specs. - Victoria - Project 6875 Shaft Packing Specs.

| Equipment Piece No.          | No.              | Equipment                                                                        | Packing Material                       | Packing Size             | No. of Rings     | Shaft O.D.               | Gland I.D.                       | B.P.F. No.                           |
|------------------------------|------------------|----------------------------------------------------------------------------------|----------------------------------------|--------------------------|------------------|--------------------------|----------------------------------|--------------------------------------|
| 516-50.1                     | 1                | Catalyst Precipitator Agitator                                                   | Crane Chemlon 706 R-15 G-40 Separators | 3/8<br>3/8<br>1/16       | 1<br>5<br>9      |                          |                                  | 107575                               |
| 516-52.1                     | 1                | Thickness Feed Tank Agitator                                                     | Crane Chemlon 706 R-15 G-40 Separators | 3/8<br>3/8<br>1/16       | 1<br>5<br>9      |                          |                                  | 10575                                |
| 516-58                       | 1                | Catalyst Dissolving Tank Agitator                                                | Crane Chemlon 706 R-15 G-40 Separators | 3/8<br>3/8<br>1/16       | 1<br>5<br>9      |                          |                                  | 10575                                |
| 516-101<br>102<br>103<br>104 | 1<br>1<br>1<br>1 | Level Control Pot<br>Level Control Pot<br>Level Control Pot<br>Level Control Pot | R-15<br>R-15<br>R-15<br>R-15           | 1/2<br>1/2<br>1/2<br>1/2 | 3<br>3<br>3<br>3 | 5/8<br>5/8<br>5/8<br>5/8 | 1-5/8<br>1-5/8<br>1-5/8<br>1-5/8 | D83140<br>D83141<br>D83142<br>D83140 |
| 518-5                        | 1                | Reactor Feed Tank Adjustable Baffle Agitator nozzle, 4"                          | R-15                                   | 5/8                      | 4                | 3                        | 4-5/16                           | 107811                               |
| 518-21                       | 1                | Recovered TMA Compressor                                                         | France Packing                         |                          |                  |                          |                                  |                                      |
| 518-30                       |                  | Mixer & Settler Gate Operating Arrgt. Packed Nozzles                             | R-15<br>R-15                           | 3/8<br>1/2               | 3<br>4           | 15/16<br>2-1/2           | 1-5/8<br>3-1/2                   | W101413<br>W1016<br>W102279          |
| 518-120                      | 1                | Mixer & Settler Gate Operating Arrgt. Packed Nozzles                             | R-15<br>R-15                           | 3/8<br>1/2               | 3<br>4           | 1-5/16<br>2-1/2          | 1-5/8<br>3-1/2                   |                                      |
| 520-2                        | 2                | Gas Engine Driver Boosters                                                       | France Packing C-629-Graphite # 2      |                          |                  |                          |                                  | 105407                               |

DUP 0838046

Specification No. 2891

40.

Packing & Gasket Specs - Victoria Project 6875

| Equipment<br>Piece No. | No. | Equipment                  | Packing Material                                           | Packing<br>Size | No. of<br>Rings | Shaft<br>O.D.  | Gland<br>I.D.     | B.P.F.<br>No. |
|------------------------|-----|----------------------------|------------------------------------------------------------|-----------------|-----------------|----------------|-------------------|---------------|
| 520-10                 | 1   | Recycle Compressor         | Dry Carbon Seals<br>Special as per Delaval<br>Dwg. E-21593 |                 |                 |                |                   | 105887        |
| 520-10                 | 1   | 2-stage Steam Turbine      |                                                            |                 |                 |                |                   | 105887        |
| 524-1                  | 4   | Propane Refrig. Compressor | France Packing<br>No. 30208<br>Barium B-10 Bronze          |                 |                 |                |                   | 10665*        |
| 524-20                 | 2   | 750 CFM Air Compressor     | France Packing<br>No. 20233-Type 414<br>Barium B-10 Bronze |                 |                 |                |                   | 106231        |
| 524-30                 | 2   | 225-hp. Bud. Compressor    | France Packing<br>No. 20244-Type 414<br>Barium B-10 Bronze |                 |                 |                |                   | 105425        |
| 527-3                  | 1   | Compressor                 | 1/32 "Teflon" rings<br>R-4B                                | 1/32<br>1/4     | 5               | 1.694<br>6-3/8 | 2.182<br>in. long | 106172        |

2

DUP 0838047

Specification No. 2891

41.

PACKING AND GASKET SPECIFICATIONS  
VICTORIA PLANT - PROJECT 6875

TRAY PACKING

| Equipment<br>Piece No. | No. | Equipment Service                | Packing Material                           | Packing<br>Size | No.<br>Rings | Packing<br>Ring<br>O.D. | Tower<br>I.D. | B.P.I<br>No. |
|------------------------|-----|----------------------------------|--------------------------------------------|-----------------|--------------|-------------------------|---------------|--------------|
| 512-50                 | 1   | Dehydrator                       | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 40-1/2                  | 41-1/2        | 106821       |
| 512-90                 | 1   | Stripping Still Col.             | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 52-3/8                  | 53-3/8        | 106819       |
| 512-150                | 1   | Topping Still Col.               | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 58-3/8                  | 59-3/8        | 106964       |
| 512-180                | 1   | Batch Still Col.                 | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 58-3/8                  | 59-3/8        | 106966       |
| 518-10                 |     | TMA Stripping Col.               | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 34-1/4                  | 35-1/4        | 108577       |
| 518-40                 |     | Waste Water Stripper             | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 28-3/8                  | 29-3/8        |              |
| 518-60                 |     | Benzene Purif. Col.              | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 43-3/8                  | 44-3/8        | 108514       |
| 518-100                | 1   | DNB Topping Column               | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 82-1/4                  | 83-1/4        | 108575       |
| 518-150                | 1   | Foreshots Concentrator<br>Column | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 3            | 70-1/4                  | 71-1/4        |              |
| 520-30                 | 1   | Mlet Scrubber Tray               | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 4            | 112-1/8                 | 113-1/8       | 106286       |
| 520-40                 | 1   | Batch Column Tray                | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 4            | 76-3/8                  | 77-3/8        | 106286       |

DUP 0838048

42.

Specification No. 2891

Packing & Gasket Specs. - Victoria Plant - Project 6875

TRAY PACKING

| Equipment<br>Piece No. | No. Equipment Service | Packing Material                           | Packing<br>Size | No.<br>Rings | Packing<br>Ring<br>O.D. | Tower<br>I.D. | B.P.F.<br>No. |
|------------------------|-----------------------|--------------------------------------------|-----------------|--------------|-------------------------|---------------|---------------|
| 520-50                 | 1 Topping Column Tray | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 4            | 82-1/4                  | 83-1/4        | 106286        |
| 520-68                 | 1 Refining Column     | Garlock 5836-Blue<br>Asbestos Glass Jacket | 1/2             | 4            | 94-1/4                  | 95-1/4        | 106286        |

PACKING & GASKET SPECIFICATIONS  
VICTORIA PLANT  
PROJECT 6875

PROCESS SERVICE - VALVE PACKING

| <u>Service</u>                                                                            | <u>Valve Size</u> | <u>Packing</u> | <u>Bonnet Gasket</u> |
|-------------------------------------------------------------------------------------------|-------------------|----------------|----------------------|
| Benzene & Benzene Solutions                                                               | All               | R-15           | G-40                 |
| Propane                                                                                   | 1/2" - 1"         | R-15           | G-40                 |
| Propane                                                                                   | 1-1/2" - 10"      | "Teflon"       | Goetze 120C          |
| Oxygen                                                                                    | All               | "Teflon"       | G-1                  |
| Freon                                                                                     | All               | -              | G-40                 |
| Butadiene - Liquid & Vapors                                                               | All               | R-15           | G-40                 |
| <i>chloride</i> " " "                                                                     | All               | * "Teflon"     |                      |
| All Other Process Valves except those of Alloyco or Annin Mfg.                            | All               | R-6            | G-1                  |
| All Process Valves of Alloyco or Annin Mfg. of FA-20, Nickel, Hastelloy, or Stainless All |                   | "Teflon"       | G-40                 |

POWER SERVICE - VALVE PACKING

|                                           |     |       |             |
|-------------------------------------------|-----|-------|-------------|
| Boiler Feedwater                          | All | R-13X | Spiral Woun |
| 550-lb. Steam & Condensate                | All | R-13X | Spiral Woun |
| 175-lb. Steam & Condensate                | All | R-6   | G-1         |
| 15-lb. Steam & Condensate                 | All | R-6   | G-1         |
| Air                                       | All | R-6   | G-1         |
| River Water                               | All | R-6   | G-1         |
| Well Water                                | All | R-6   | G-1         |
| Soft Water                                | All | R-6   | G-1         |
| All Valves Requiring Packing 1/8" or Less | -   | R-8T  | -           |

Specification No. 2891

\* Teflon chevrons  
" discs  
" cylinders  
see COO #1152  
JL Hall 2/20/52

DUP 0838049

Specification No. 2891

1/4.

**PACKING AND GASKET RECOMMENDATIONS**  
**VICTORIA PLANT - PROJECT 6875**

DUP 0838050

**VALVE STEEL PACKING SIZES**

**Wm. Powell Co. Valves - 150# & 300# Class**

| Pipe Size | Gate Valves       |                   |              | Tot. No. of Rings | Globe Valves      |                   |              | Tot. No. of Rings |
|-----------|-------------------|-------------------|--------------|-------------------|-------------------|-------------------|--------------|-------------------|
|           | Stuffing Box O.D. | Stuffing Box I.D. | Packing Size |                   | Stuffing Box O.D. | Stuffing Box I.D. | Packing Size |                   |
| 1 1/2     | 51/64             | 1/2               | 3/16         | 7                 | 47/64             | 15/32             | 3/16         | 7                 |
| 3/4       | 59/64             | 9/16              | 3/16         | 5                 | 59/64             | 9/16              | 3/16         | 5                 |
| 1         | 63/64             | 5/8               | 3/16         | 6                 |                   |                   |              |                   |
| 1-1/4     |                   |                   |              |                   | 1-7/64            | 11/16             | 1/4          | 6                 |
| 1-1/2     | 1-15/64           | 3/4               | 1/4          | 6                 | 1-19/64           | 13/16             | 1/4          | 7                 |
| 2-1/2     |                   |                   |              |                   |                   |                   |              |                   |

**Wm. Powell Co. Valves - 600# Class**

| Pipe Size | Stuffing Box O.D. | Stuffing Box I.D. | Packing Size | Tot. No. of Rings | Stuffing Box O.D. | Stuffing Box I.D. | Packing Size | Tot. No. of Rings |
|-----------|-------------------|-------------------|--------------|-------------------|-------------------|-------------------|--------------|-------------------|
| 1 1/2     | 51/64             | 1/2               | 3/16         | 8                 | 51/64             | 1/2               | 3/16         | 7                 |
| 3/4       | 59/64             | 9/16              | 3/16         | 7                 | 63/64             | 5/8               | 3/16         | 8                 |
| 1         | 63/64             | 5/8               | 3/16         | 6                 |                   |                   |              |                   |
| 1-1/4     |                   |                   |              |                   | 1-15/64           | 3/4               | 1/4          | 8                 |
| 1-1/2     | 1-15/64           | 3/4               | 1/4          | 8                 | 1-39/64           | 1                 | 5/16         | 8                 |
| 2         |                   |                   |              |                   |                   |                   |              |                   |

**Edwards Valves**

**Non-Return Valves**

| Pipe Size | Stuffing Box |       | Packing Size | Tot. No. of Rings |
|-----------|--------------|-------|--------------|-------------------|
|           | O.D.         | I.D.  |              |                   |
| 4         | 2-1/4        | 1-1/2 | 3/8          | 8                 |
| 6         | 2-1/2        | 1-3/4 | 3/8          | 8                 |

DUP 0838051

Specification No. 2891

5.

Packing & Gasket Recommendations - Victoria Plant - Project 6875  
Valve Stem Packing Sizes

| Pipe<br>Size                  | Meter Gate Valves    |                 | Tot. No.<br>of Rings | Meter Globe Valves   |                 | Tot. No.<br>of Rings |
|-------------------------------|----------------------|-----------------|----------------------|----------------------|-----------------|----------------------|
|                               | Stuffing Box<br>O.D. | Packing<br>Size |                      | Stuffing Box<br>O.D. | Packing<br>Size |                      |
| Henry Vogt Machine Co. Valves |                      |                 |                      |                      |                 |                      |
| 1/4                           | 15/32                | .271            | *                    | 15/32                | .271            | *                    |
| 3/8                           | 5/8                  | .333            | *                    | 5/8                  | .333            | *                    |
| 1/2                           | 11/16                | .396            | 1/8*                 | 11/16                | .396            | 1/8*                 |

\*On packing size 1/8 and below, use R&T Packing

SPEC. 2957

DUP 0838052

SPECIFICATION NO. 2957

PROJECT 6875-5 VICTORIA

BOILER INSULATION AND BRICK SPECIFICATION

INSULATION SPECIFICATIONS PART I

BRICK SPECIFICATIONS PART II

REFERENCE DRAWINGS

- D-106725-4 - Front Views
- D-106726-5 - Sectional Side Views
- D-106727-5 - Sectional Plan Views
- D-106728-4 - Foundation
- D-106729-6 - Arrgt. of Air Heater,  
Flues, Ducts & Fans.

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Specification No. 2957 Sheet 1

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BOILER 4 & 5 - INSULATION AND BRICK SPECIFICATION

PART 1

1. Boiler Rear Wall and Boiler Side Walls Back of Tubes.
  - (a) 3" diatomaceous earth block (du Pont Code N1H) Insulation laced in place.
  - (b) 1-1/2"x16x8 BWG expanded metal lathe.
  - (c) 1/2" mineral wall cement (du Pont Code NJ).
  - (d) 1/2" hex wire (poultry netting).
  - (e) Two 1/4" layers of thermotex BX (du Pont Code E Finish).
2. Furnace Side Walls Back of Tubes
  - (a) 2" diatomaceous earth block insulation (du Pont Code N1H).
  - (b) 2" mineral wall block insulation (du Pont Code N1E).
  - (c) 1-1/2"x16 BWG expanded metal lathe.
  - (d) 1/2" mineral wall cement (du Pont Code NJ).
  - (e) 1-1/2" hex wire (poultry netting).
  - (f) Two 1/4" layers of thermotex BX (du Pont Code E Finish).
3. Furnace Wall Back of Tubes
  - (a) 2" diatomaceous earth block insulation (Code N1H).
  - (b) 2" mineral wall block insulation (du Pont Code N1E).
  - (c) 1-1/2"x16 BWG expanded metal lathe.
  - (d) 1/2" mineral wall cement.
  - (e) 1-1/2" hex wire (poultry netting).
  - (f) Two 1/4" layers of thermotex BX (du Pont Code E Finish).
4. Steam Drum Shell, Lower Drum and Steam Drum Heaters
  - (a) 3-1/2" 85% magnesia block insulation (du Pont Code N1A).
  - (b) 1-1/2" hex wire (poultry netting).
  - (c) 1-1/2" asbestos cement finishing (without Portland cement).
  - (d) 1-1/2" hex wire (poultry netting).
  - (e) Two 1/4" layers of Thermotex BX (du Pont Code E Finish).
5. Flue - Boiler to Air Heater
  - (a) 1" mineral wall insulating block (du Pont Code N1E).
  - (b) 2-1/2" 85% magnesia block insulation (du Pont Code N1A).
  - (c) 1-1/2" hex wire (poultry netting).
  - (d) Metal corner beads over the hex wire.
  - (e) 1/2" asbestos finishing cement (without Portland cement).
  - (f) 1-1/2" hex wire (poultry netting).
  - (g) Two 1/4" layers of thermotex BX (du Pont Code E Finish).
6. Air Heater Casing
  - (a) 1-1/2" 85% magnesia block insulation (du Pont Code N1A).
  - (b) 1-1/2" hex wire (poultry netting).

- (c) Metal corner beads over the hex wire.
- (d) 1/2" asbestos finishing cement (without Portland cement).
- (e) 1-1/2" hex wire (poultry netting).
- (f) Two 1/4" layers of thermotex BX (du Pont Code E Finish).

7. Flue - Air Heaters to Induce Air Fan

- (a) 2" 85% magnesia block insulation (du Pont Code N1A).
- (b) 1-1/2" hex wire (poultry netting).
- (c) Metal corner beads.
- (d) 1/2" asbestos finishing cement (without Portland cement).
- (e) 1-1/2" hex wire (poultry netting).
- (f) Two 1/4" layers of thermotex BX (du Pont Code E Finish).

8. Induced Draft Fan

- (a) 2" 85% magnesia block insulation (du Pont Code N1A).
- (b) To be applied over road mesh spot welded to the stiffener angles of the induced draft fan - Similar to Figure 30 - Standard Engineering Specification No. 1984 - Sheet SN-30-F.
- (c) 1-1/2" hex wire (poultry netting).
- (d) 1/2" asbestos finishing cement.
- (e) 1-1/2" hex wire (poultry netting).
- (f) Two 1/4" layers of thermotex BX (du Pont Code E Finish).

9. Duct - Air Heater to Burner Wind Box

- (a) 1-1/2" 85% magnesia block insulation (du Pont Code N1A).
- (b) 1-1/2" hex wire (poultry netting).
- (c) Metal Corner beads.
- (d) 1/2" asbestos finishing cement (without Portland Cement).
- (e) 1-1/2" hex wire (poultry netting).
- (f) Two 1/4" layers of thermotex BX (du Pont Code E Finish.)

DUP 0838055

### GENERAL NOTES

1. Specification 1984 - Standard Thermal Insulation for Pipe, Valves, Fittings and Equipment, dated 4/25-49 - is hereby made a part of this specification.
2. Safety precautions - on all hot bare surfaces where insulation is not specified - insulation shall be installed safety high to prevent hazards.
3. Any variation of thickness or class of insulation or finishes contained herein are to be taken up with this office.
4. Steam traps shall not be insulated regardless of location, unless specifically specified by Wilmington Design, indicated on drawings, or the Field forces. This is an exception to our safety precautions.
5. Where fire brick is exposed to the weather under the side wall headers and behind mud drum, weatherproof by applying two 1/4" layers of thermotex BX over 1-1/2" hex wire mesh (poultry netting.) The expanded metal lathe shall be No. 19 max B.W.G. metal having 1-1/2" or 2" hex mesh and finish.
6. Provisions for expansion in the insulation of the flues, ducts, and long pipes such that the finish will not crack or peel as a result of expansion or contraction.
7. On wall areas covered with two or more layers of insulating block, the joints of the two layers is not coincide but laid up with broken joint construction and each layer shall be pointed up where required with suitable insulating cement (du Pont Code NJ).
8. The insulation block on all walls shall have its joints butted tightly and shall be laid up dry. Lacing wire shall be used to hold the blocks in place. The 1-1/2" No. 16 B.W.G. expanded metal lathe shall be installed over the high temperature and anchored to studs with washers and speed nuts.
9. The 1-1/2" of mineral wall cement (du Pont Code NJ) shall be applied over the expanded metallathe and formed into panels approximately 3' square grooving. Shrinking cracks should be filled in above the finish edge coat is applied. The 1-1/2" to 2" (No. 19 B.W.G. max) hex wire mesh (poultry netting) shall be tightly stretched over the outside of the wall cement. On each stud outside the wire mesh place a washer and a hex nut. The nut shall be tightened until it has been forced into the insulation far enough to be flush with the surface of the finish coat when it is applied. The excess stud length shall then be cut off. The two 1/4" layers of mastic thermotex BX shall be applied directly on to the hex wire.

BRICK WORK SPECIFICATION- BOILERS 4 & 5

PART II

1. Boiler rear wall and boiler side walls below tubes.  
9" of second quality fire brick  
B&W air set mortar, or equal, for laying up the brick.
2. Furnace side walls below headers.  
9" lining of first quality fire brick.  
9" of second quality fire brick.  
B&W air set mortar, or equal, for laying up the brick.
3. Furnace front wall below header (burner wall).  
9" of first quality fire brick.  
B&W air set mortar, or equal, for laying up the brick.
4. Lower drum protecting pier.  
13-1/2" of second quality fire and brick.  
B&W air set mortar, or equal, for laying up the brick.
5. Bridge wall  
18" of first quality fire brick  
B&W air set mortar, or equal, for laying up the brick.  
B&W Koacast, or equal, for sealing at top of wall.
6. Paving on foundation - lower drum closure plate to rear wall.  
Flat course of second quality fire brick.  
B&W air set mortar, or equal, for laying up the brick.
7. Paving on foundation - low drum pier to bridge wall.  
Rowlock course of second quality fire brick.  
B&W air set mortar, or equal, for laying up the brick.
8. Furnace floor  
One row of 6" hollow tile (including load bearing tile)  
Cement mortar for laying up the hollow tile.  
1/4" asbestos millboard.  
2-1/2" of B&W K-20 insulating fire brick, or equal.  
B&W air set mortar, or equal, for laying up the insulating fire brick.  
5" of first quality fire brick (two 2-1/2" courses).  
B&W air set mortar, or equal, for laying up the brick.  
B&W air set mortar, or equal, for slushing the floor.
9. Boiler rear wall and boiler side walls back of tubes.  
2" square edge tile  
B&W air set mortar, or equal, for laying up the tile.  
B&W Baffle mix, or equal, for sealing around studs through tile.  
B&W baffle mix, or equal, for sealing wherever else required.
10. Furnace side walls back of tubes.  
2-1/2" square edge tile.  
B&W air set mortar, or equal, for laying up the tile.  
B&W baffle mix, or equal, for sealing around studs through tile.  
B&W baffle mix, or equal, for sealing at studded offset tubes.

B&W baffle mix, or equal, for sealing wherever else required.  
B&W Koacast, or equal, for sealing at top of side wall headers.

11. Furnace front wall back of tubes.  
2-1/2" square edge tile.  
B&W air set mortar, or equal, for laying up the tile.  
B&W baffle mix, or equal, for sealing around studs through tile.  
B&W baffle mix, or equal, for sealing wherever else required.
12. Front baffle between upper offset tubes (1st pass only)  
2" square edge tile (use 2"x6"x12" tile).  
B&W air set mortar, or equal, for laying up the tile.  
B&W baffle mix, or equal, for sealing at top and bottom of baffle.  
B&W baffle mix, or equal, for sealing at junction of baffle at side walls.  
B&W baffle mix, or equal, for sealing wherever else required.
13. Rear baffle  
2" square edge tile (use 2"x6"x12" tile).  
B&W air set mortar, or equal, for laying up the tile.  
B&W baffle mix, or equal, for sealing the junction of baffle at side wall.  
B&W baffle mix, or equal, for sealing wherever else required.
14. Seal between close spaced baffle tubes and side walls  
B&W baffle mix, or equal.
15. Loose asbestos, asbestos rope, etc. required for this job.
16. To be furnished by Babcock & Wilcox and to be installed by the contractor
  - (a) Two layers of quarter inch asbestos millboard between brick work and side wall header supports.
  - (b) Special shaped tile and millboard for 3"x7" doors.
  - (c) Special shaped wall closure tile and baffle tile to fit curve of tubes.
  - (d) Bonding tile and holders for burner wall.
  - (e) Burner tile and mortar for burner throats.
  - (f) 1" of Superex insulation between burner wall and inter-plate of burner box.
  - (g) B&W K-20 concrete mix for lining refractory lined doors in the field.
17. General
  - (a) Foundations will be furnished and installed by du Pont.
  - (b) Studs on tubes will be furnished by Babcock & Wilcox and installed by du Pont.
  - (c) Washers, speed nuts, and hexagonal nuts for the brickwork and insulation will be furnished by Babcock & Wilcox and installed by the contractor.
  - (d) The unit will be installed as an outdoor insulation.
  - (e) Fire brick and tile shall conform to ASTM specification C 64-47 type C and a cold crushing strength of at least 1000 psi.
18. Installation procedure - tube and tile walls  
The tubes shall be backed up with tile of ASTM specification C-64-47 type C, with a cold crushing strength of not less than 1000 psi.

laid in hot air set mortar. The tile shall be held against the tubes by washers and speed nuts on all walls except the front wall. On that wall, the tile shall be inserted between the wall tubes and the supply tubes.

17. The following reference drawings are part of this specification:

- D-106725-4 Front views
- D-106726-5 Sectional side views
- D-106727-5 Sectional plan views
- D-106728-4 Foundations
- D-106729-6 Arrangement of air heater, flues, ducts & fans.