

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE CITY AND COUNTY OF SAN FRANCISCO

---oOo---

MANUEL LUNA,

PLAINTIFF (S).

-VS-

ABEX CORPORATION, et. al.,

DEFENDANT (S).

PLAINTIFF'S EXHIBIT

ET-34

No. 954371

RECEIVED
APR 13 1995

IMAI, TADLOCK, KEENT

924.59.A

RECORDS and/or EXHIBITS

PERTAINING TO:

DEPOSITION OF ROSS A. HACKER

April 5, 1995

Plaintiff's A - I

TOOKER & ANTZ

CERTIFIED SHORT HAND REPORTERS

131 STEUART STREET
SAN FRANCISCO 94105
(415) 392-0650

FREDERIC R. TOOKER

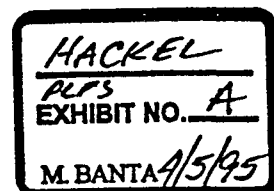
KEMBLE ANTZ

BRAYTON, GISVOLD & HARLEY
ATTORNEYS AT LAW
999 GRANT AVENUE
P.O. BOX 2109
NOVATO, CALIFORNIA 94948
(415) 898-1555

ALAN R. BRAYTON, ESQ., S.B. #73685
ERIC R. WAGNER, ESQ., S.B. #142388
BRAYTON, GISVOLD & HARLEY
Attorneys at Law
999 Grant Avenue
P.O. Box 2109
Novato, California 94948
(415) 898-1555

Attorneys for Plaintiffs

SUPERIOR COURT OF CALIFORNIA
COUNTY OF SAN FRANCISCO



MANUEL LUNA,

Plaintiff,

vs.

ABEX CORPORATION, et al.,

Defendants.

No. 954371

SECOND RE-NOTICE OF TAKING
DEPOSITION AND REQUEST FOR
PRODUCTION OF DOCUMENTS

TO ALL DEFENDANTS HEREIN AND THEIR ATTORNEYS OF RECORD:

PLEASE TAKE NOTICE that pursuant to the previously served Notice of Taking
Deposition and Request for Production of Documents, plaintiffs will now take the deposition
of defendant ELLIOTT COMPANY's Person(s) Most Knowledgeable and Custodian(s) of
Records on the following date(s) and time(s):

April 5, 1995

ELLIOTT COMPANY

COR 10:00 a.m.

PMK 11:00 a.m.

This deposition will be recorded stenographically and will continue day to day until complete.

///

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1 Counsel are requested to call plaintiff's counsel's deposition hotline the day before
2 the scheduled deposition, (415)899-1011, extension 152, to confirm whether the deposition will
3 be going forward as scheduled.

4 Dated: 7-27-85

BRAYTON, GISVOLD & HARLEY

5
6 By: 
7 Eric R. Wagner
8 Attorneys for Plaintiff
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BRAYTON, GISVOI, Harley
ATTORNEYS AT LAW
999 GRANT AVENUE
P.O. BOX 2109
NOVATO, CALIFORNIA 94948
(415) 896-1555

PROOF OF SERVICE BY MAIL

I am employed in the County of Marin, State of California. I am over the age of 18 years and am not a party to the within action. My business address is 999 Grant Avenue, Novato, California 94947.

On March 20, 1995, I served the within:

SECOND RE-NOTICE OF TAKING DEPOSITION AND REQUEST FOR PRODUCTION OF DOCUMENTS

on the interested parties in this action by transmitting a true copy thereof in the following manner.

I caused each of the above document(s) to be placed in a sealed envelope, postage thereon prepaid, addressed and served as follows:

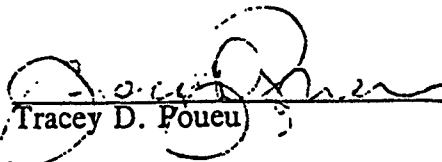
SEE ATTACHED LIST OF DEFENDANTS

BERRY & BERRY
Station D., P.O. Box 70250
Oakland, CA 94612-0250

BY MAIL SERVICE: I am readily familiar with the business practice at my place of business for collection and processing of correspondence for delivery by mail. Correspondence so collected and processed is deposited with the United States Postal Service on the same day in the ordinary course of business. On the above date the said envelope was collected for the United States Postal Service following ordinary business practices.

Executed this 20th day of March, 1995, at Novato, California.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.


Tracey D. Poueu

Maanuel Luna v. Abex Corporation, et al.
San Francisco Superior Court Case No. 954371

RUN DATE: 03/20/95 BY TP
SORT BY: ATTORNEY ID
Luna, Manuel

BRAYTON, GISVOLD & HARLEY
SERVICE LIST

PAGE: 1

TTER ELECTRIC INC Adams, Nye, Sinunu & Walker One Jackson Place 633 Battery St., 5th Floor San Francisco, CA 94111 (415) 982-8955 (415) 982-2042	GARLOCK INC Glaspy & Glaspy One Walnut Creek Center 100 Pringle Ave., Ste. 750 Walnut Creek, CA 94596 (510)947-1300 (510)947-1594	ANCHOR PACKING COMPANY Glaspy & Glaspy One Walnut Creek Center 100 Pringle Ave., Ste. 750 Walnut Creek, CA 94596 (510)947-1300 (510)947-1594	MH DETRICK COMPANY Gordon & Rees Embarcadero Center West 275 Battery Street, 20th Fl San Francisco, CA 94111 (415)986-5900 (415)986-8
RAPID AMERICAN CORP Gordon & Rees Embarcadero Center West 275 Battery Street, 20th Floor San Francisco, CA 94111 (415)986-5900 (415)986-8054	GAF CORPORATION Haight, Brown & Bonesteel (SF) 201 Sansome St., Suite 300 San Francisco, CA 94104 (415)986-7700 (415)986-6945	ARMSTRONG WORLD INDUSTRIES Haight, Brown & Bonesteel (SF) 201 Sansome St., Suite 300 San Francisco, CA 94104 (415)986-7700 (415)986-6945	AP GREEN REFRACTORIES CO Haight, Brown & Bonesteel (SF) 201 Sansome St., Suite 300 San Francisco, CA 94104 (415)986-7700 (415)986-6
FLEXITALLIC INC Haight, Brown & Bonesteel (SF) 201 Sansome St., Suite 300 San Francisco, CA 94104 (415)986-7700 (415)986-6945	T&N PLC (TURNER & NEWALL) Haight, Brown & Bonesteel (SF) 201 Sansome St., Suite 300 San Francisco, CA 94104 (415)986-7700 (415)986-6945	ELLIOTT Imai, Tadlock & Keeney 180 Montgomery St., Ste. 1000 San Francisco, CA 94104 (415)989-8687 (415)989-7640	PLANT INSULATION COMPANY Jackson & Wallace 1 Maritime Plaza 22nd Floor San Francisco, CA 94111 (415)982-6300 (415)982-6
KAISER CEMENT CORPORATION Kincaid, Gianunzio P.O. Box 1828 200 Webster Street, Suite 200 Oakland, CA 94604-0828 (510)465-5212 (510)465-0362	BECK ELECTRICAL SUPPLY Low, Ball & Lynch 601 California Street 21st Floor San Francisco, CA 94108 (415)981-6630 (415)982-1634	NORTH AMERICAN REFRACTORIES CO Paetzold, White & Brodsky 101 California Street Suite 1875 San Francisco, CA 94111 (415)249-0966 (415)249-0964	CHEVRON USA PRODUCTS COMPANY Sedgwick, Detert, et al. One Embarcadero Center 16th Floor San Francisco, CA 94111-376 (415)781-7900 (415)781-2
CIFIC GAS AND ELECTRIC CO Sedgwick, Detert, et al. One Embarcadero Center 16th Floor San Francisco, CA 94111-3765 (415)781-7900 (415)781-2635	ASBESTOS CORPORATION LIMITED Stevens, Drummond & Gifford 1910 Olympic Blvd. Suite 250 Walnut Creek, CA 94596 (510)944-5550 (510)256-9669	AMERICAN ASBESTOS COMPANY Vogl & Meredith 456 Montgomery St., 20th Floor San Francisco, CA 94104 (415)398-0200 (415)398-2820	MALTBY ELECTRIC SUPPLY CO INC Walsworth, Franklin, et al. 580 California St., Ste. 11 San Francisco, CA 94104 (415)781-7072 (415)391-6

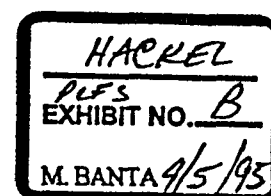
<<END OF REPORT>>

BRAYTON, GISVOLD & HARLEY
ATTORNEYS AT LAW
999 GRANT AVENUE
P.O. BOX 2109
NOVATO, CALIFORNIA 94948
(415) 898-1555

ALAN R. BRAYTON, ESQ., S.B. #73685
ERIC R. WAGNER, ESQ., S.B. #142388
BRAYTON, GISVOLD & HARLEY
Attorneys at Law
999 Grant Avenue
P.O. Box 2109
Novato, California 94948
(415) 898-1555

Attorneys for Plaintiffs

SUPERIOR COURT OF CALIFORNIA
COUNTY OF SAN FRANCISCO



MANUEL LUNA,

Plaintiff,

vs.

ABEX CORPORATION, et al.,

Defendants.

No. 954371

RE-NOTICE OF TAKING DEPOSITION
AND REQUEST FOR PRODUCTION OF
DOCUMENTS

TO ALL DEFENDANTS HEREIN AND THEIR ATTORNEYS OF RECORD:

PLEASE TAKE NOTICE that on the dates and times set forth below, at the offices of Tooker and Antz, located at 131 Steuart Street, Suite 201, San Francisco, California 94105, plaintiffs will take the deposition of the custodian of records (hereinafter "COR") and the person most knowledgeable (hereinafter "PMK") of defendant ELLIOT COMPANY:

January 5, 1995

ELLIOTT COMPANY

COR 10:00 a.m.

PMK 11:00 a.m.

This deposition will continue day to day until complete.

Pursuant to California Code of Civil Procedure section 2025(h), plaintiffs in the above-captioned action hereby request defendant to bring to the deposition for inspection and copying by Brayton, Gisvold & Harley, the documents and things described below. This notice to

1 produce specifically embraces, in addition to documents within the possession, custody, or
2 control of said defendant, documents within the possession, custody or control of its agents,
3 representatives or attorneys. This notice to produce also embraces originals, identical copies
4 if the original is unavailable, all nonidentical copies (whether different from the original
5 because of notes made on such copies or otherwise), and other documents described herein.

6 As used herein, the word "WRITINGS" shall mean "WRITINGS" as defined by
7 Evidence Code Section 250.

8 The words "YOU" or "YOURS" mean the named defendant herein and all predecessors
9 and successors in interest of the named defendant.

10 DOCUMENTS TO BE PRODUCED
11 *Custodian of Records*

12 Category No. 1.

13 Any and all WRITINGS pertaining to the supply, sale or distribution of asbestos-
14 containing products by YOU to General Electric Company, Oakland, CA, at any time
15 during 1960 to 1967.

16 Category No. 2.

17 Any and all WRITINGS pertaining to the supply, sale or distribution of asbestos-
18 containing products by YOU to Standard Oil, Richmond, CA, at any time during 1960
19 to 1967.

20 Category No. 3.

21 Any and all WRITINGS pertaining to the supply, sale or distribution of asbestos-
22 containing products by YOU to Ames Research Center, Mountain View, CA, at any time
23 during 1960 to 1967.

24 Category No. 4.

25 Any and all WRITINGS pertaining to the supply, sale or distribution of asbestos-
26 containing products by YOU to Hunters Point Naval Shipyard, San Francisco, CA, at any time
27 from 1960 to 1973.

28 Category No. 5.

Any and all WRITINGS pertaining to the supply, sale or distribution of asbestos-
containing products by YOU to City of San Francisco, Municipal Railway, San Francisco, CA,
at any time from 1966 to 1974.

Category No. 6.

Any and all WRITINGS pertaining to the supply, sale or distribution of asbestos-
containing products by YOU to Mare Island Naval Shipyard, Vallejo, CA, at any time from
1966 to present.

Category No. 7.

Any and all WRITINGS identifying the person(s) responsible for acquisition, purchase and/or distribution of asbestos-containing products by YOU to the job sites set forth in categories one (1) through six (6) above.

Category No. 8.

Any and all plans, specifications, blueprints, as built, or any other such writings which concern the use or installation of asbestos-containing products by YOU at the job sites set forth in categories one (1) through six (6) above.

Category No. 9

Any and all WRITINGS identifying the manufacturer(s) of asbestos-containing product or materials supplied, installed, sold, or distributed by YOU to the job sites set forth in categories one (1) through six (6) above.

Category No. 10

Any and all WRITINGS identifying the supplier(s) of asbestos-containing products or materials to the job sites set forth in categories one (1) through six (6) above.

Category No. 11.

Any and all WRITINGS identifying the distributor(s) of asbestos-containing products or materials to the job sites set forth in categories one (1) through six (6) above.

Category No. 12.

Any and all WRITINGS, including but not limited to, contracts, bills of lading, bills, sales receipts, purchase orders, requisition forms, and/or customer lists which identify the suppliers of any asbestos-containing products which were supplied, sold or installed at the job sites set forth in categories one (1) through six (6) above.

Category No. 13.

Any and all WRITINGS reflecting workers' compensation claims made for alleged asbestos-related injuries sustained by your employees.

Category No. 14.

Any and all WRITINGS which identify when YOU first learned of the potential hazards associated with asbestos exposure.

Category No. 15.

Any and all WRITINGS which reflect the first date when YOU warned any person, including but not limited to your own employees or your customers, of the potential hazards associated with asbestos exposure.

Category No. 16.

Any and all WRITINGS identifying the full and exact corporate name, the date of incorporation, the date of merger or acquisition and/or the date of dissolution of any entity which merged with, or which was purchased or otherwise acquired by YOU, or a predecessor or subsidiary.

1 The witness will be required to answer questions concerning the documents produced
2 at the deposition.

3 IT IS FURTHER NOTICED that on the date and time set forth above, and continuing
4 each day thereafter and until completed, at the court reporting offices of Tooker & Antz, 131
5 Steuart Street, San Francisco, California, plaintiffs will take the deposition of the person or
6 persons presently employed by defendant who are most qualified and most knowledgeable about
7 the matters set forth below.

8 California Code of Civil Procedure §2025 mandates that defendant "designate and
9 produce" the officers or employees "most qualified" to testify on its behalf as to knowledge
10 of the matters set forth in this notice of deposition. The person or persons so designated by
11 defendant must testify "to the extent of any information known or reasonably available" to
12 defendant (C.C.P. §2025(d)).

13 CATEGORIES OF INFORMATION
14 *Person Most Knowledgeable*

15 Category No. 1.

16 All INFORMATION pertaining to the supply, sale or distribution of asbestos-containing
17 products by YOU to General Electric Company, Oakland, CA, at any time during 1960
18 to 1967.

19 Category No. 2.

20 All INFORMATION pertaining to the supply, sale or distribution of asbestos-containing
21 products by YOU to Standard Oil, Richmond, CA, at any time during 1960 to 1967.

22 Category No. 3.

23 All INFORMATION pertaining to the supply, sale or distribution of asbestos-containing
24 products by YOU to Ames Research Center, Mountain View, CA, at any time during 1960 to
25 1967.

26 Category No. 4.

27 All INFORMATION pertaining to the supply, sale or distribution of asbestos-containing
28 products by YOU to Hunters Point Naval Shipyard, San Francisco, CA, at any time from 1960
to 1973.

Category No. 5.

All INFORMATION pertaining to the supply, sale or distribution of asbestos-containing
products by YOU to City of San Francisco, Municipal Railway, San Francisco, CA, at any
time from 1966 to 1974.

1 Category No. 6.

2 All INFORMATION pertaining to the supply, sale or distribution of asbestos-containing
3 products by YOU to Mare Island Naval Shipyard, Vallejo, CA, at any time from 1966 to
4 present.

4 Category No. 7.

5 All INFORMATION identifying the person(s) responsible for aquisition, purchase
6 and/or distribution of asbestos-containing products by YOU to the job sites set forth in
7 categories one (1) through six (6) above.

7 Category No. 8.

8 All INFORMATION concerning plans, specifications, blueprints, as built, or any other
9 such writings which concern the use or installation of asbestos-containing products by YOU
10 at the job sites set forth in categories one (1) through six (6) above.

10 Category No. 9.

11 All INFORMATION identifying the manufacturer(s) of asbestos-containing products or
12 materials supplied, installed, sold, or distributed by YOU to the job sites set forth in
13 categories one (1) through six (6) above.

13 Category No. 10.

14 All INFORMATION identifying the supplier(s) of asbestos-containing products or
15 materials to the job sites set forth in categories one (1) through six (6) above.

15 Category No. 11.

16 All INFORMATION identifying the distributor(s) of asbestos-containing products or
17 materials to the job sites set forth in categories one (1) through six (6) above.

18 Category No. 12.

19 All INFORMATION concerning contracts, bills of lading, bills, sales receipts, purchase
20 orders, requisition forms, and/or customer lists which identify the suppliers of any
21 asbestos-containing products which were supplied, sold or installed at the job sites set
22 forth in categories one (1) through six (6) above.

21 Category No. 13.

22 All INFORMATION reflecting workers' compensation claims made for alleged
23 asbestos-related injuries sustained by your employees.

24 Category No. 14.

25 All INFORMATION which identify when YOU first learned of the potential hazards
26 associated with asbestos exposure.

26 Category No. 15.

27 All INFORMATION which reflect the first date when YOU warned any person,
28 including but not limited to your own employees or your customers, of the potential
29 hazards associated with asbestos exposure.

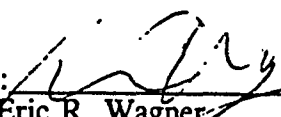
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Category No. 16.

All INFORMATION identifying the full and exact corporate name, the date of incorporation, the date of merger or acquisition and/or the date of dissolution of any entity which merged with, or which was purchased or otherwise acquired by YOU, or a predecessor or subsidiary.

Dated: 12/13/14

BRAYTON, GISVOLD & HARLEY

By: 
Eric R. Wagner
Attorneys for Plaintiff

1
2 PROOF OF SERVICE BY MAIL

3
4 I am employed in the County of Marin, State of California. I am over the age of 18
5 years and am not a party to the within action. My business address is 999 Grant Avenue,
6 Novato, California 94947.

7 On December 14, 1994, I served the within:

8 **RE-NOTICE OF TAKING DEPOSITION AND REQUEST FOR PRODUCTION OF**
9 **DOCUMENTS**

10 on the interested parties in this action by transmitting a true copy thereof in the following
11 manner.

12 I caused each of the above document(s) to be placed in a sealed envelope, postage
13 thereon prepaid, addressed and served as follows:

14 **SEE ATTACHED LIST OF DEFENDANTS**

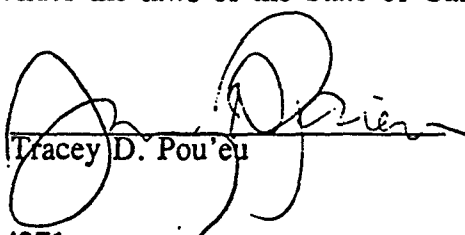
15 **BERRY & BERRY**
16 Station D., P.O. Box 70250
17 Oakland, CA 94612-0250

18 **BY MAIL SERVICE:**

I am readily familiar with the business practice at my place of
business for collection and processing of correspondence for
delivery by mail. Correspondence so collected and processed is
deposited with the United States Postal Service on the same day
in the ordinary course of business. On the above date the said
envelope was collected for the United States Postal Service
following ordinary business practices.

19 Executed this 14th day of Dec, 1994, at Novato, California.

20 I declare under penalty of perjury under the laws of the State of California that the
21 foregoing is true and correct.

22 
Tracey D. Pou'eu

23 Manuel Luna v. Abex Corporation, et al.
24 San Francisco Superior Court Case No. 954371
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RUN DATE: 12/12/94 BY DHC
 SORT BY: ATTORNEY TO
 CLIENT: 5289 - Luna, Manuel

RRAYTON, GISSON & HARLEY
 SERVICE LIST

PAGE: 1

POTTER ELECTRIC, INC.
 Adams, Hye, Sinnott & Walter
 One Jackson Place
 433 Battery St., 5th Floor
 San Francisco, CA 94111
 (415) 982-8955 (415) 982-2842

CARLOCK, INC.
 Glaspy & Glaspy
 One Walnut Creek Center
 188 Pringle Ave., Ste. 750
 Walnut Creek, CA 94596
 (510) 947-1388 (510) 947-1594

ANCHOR PACKING COMPANY
 Glaspy & Glaspy
 One Walnut Creek Center
 188 Pringle Ave., Ste. 750
 Walnut Creek, CA 94596
 (510) 947-1388 (510) 947-1594

DETRICK, M.H. COMPANY
 Gordon & Ross
 Embarcadero Center West
 275 Battery Street, 28th
 San Francisco, CA 94111
 (415) 986-5988 (415) 986-

FLEXITALITE, INC.
 Haight, Brown & Bonesteel
 281 Sansone St., Suite 300
 San Francisco, CA 94104
 (415) 986-7788 (415) 986-6945

CAF CORPORATION
 Haight, Brown & Bonesteel
 281 Sansone St., Suite 300
 San Francisco, CA 94104
 (415) 986-7788 (415) 986-6945

ARMSTRONG WORLD INDUSTRIES
 Haight, Brown & Bonesteel
 281 Sansone St., Suite 300
 San Francisco, CA 94104
 (415) 986-7788 (415) 986-6945

A.P. GIFFIN REFRACTORIES CO.
 Haight, Brown & Bonesteel
 281 Sansone St., Suite 300
 San Francisco, CA 94104
 (415) 986-7788 (415) 986-

TURNER & NEWALI
 Haight, Brown & Bonesteel
 281 Sansone St., Suite 300
 San Francisco, CA 94104
 (415) 986-7788 (415) 986-6945

WESTERN MACARTHUR COMPANY
 Hardin, Cook, et al.
 Lake Merritt Plaza
 1999 Harrison Street
 Oakland, CA 94612
 (510) 444-3131 (510) 839-7948

FILTOTT
 Tsai, Tadlock & Keeney
 188 Montgomery St., Ste. 1800
 San Francisco, CA 94104
 (415) 989-8687 (415) 989-7648

PLANT INSULATION COMPANY
 Jackson & Wallace
 1 Maritime Plaza
 22nd Floor
 San Francisco, CA 94111
 (415) 982-6300 (415) 982-

KAISER CEMENT CORPORATION
 Kincaid, Giannuzio
 P.O. Box 1878
 288 Webster Street
 Oakland, CA 94604-0878
 (510) 465-5212 (510) 465-0362

HECK ELECTRICAL SUPPLY
 Low, Ball & Lynch
 481 California Street
 21st Floor
 San Francisco, CA 94108
 (415) 981-6638 (415) 982-1634

NORTH AMERICAN REFRACTORIES CO.
 Pantzold, White & Brndsky
 181 California Street
 Suite 1875
 San Francisco, CA 94111
 (415) 249-8966 (415) 249-8966

MANV. CORP. ASD. DISFAS. COMP. F
 Ropers, Majeski et al.
 678 Howard Street
 San Francisco, CA 94105
 (415) 543-4888

CHEVRON USA, INC.
 Sedgwick, Detert, et al.
 One Embarcadero Center
 16th Floor
 San Francisco, CA 94111
 (415) 781-7988 (415) 781-2635

PACIFIC GAS AND ELECTRIC CO.
 Sedgwick, Detert, et al.
 One Embarcadero Center
 16th Floor
 San Francisco, CA 94111
 (415) 781-7988 (415) 781-2635

ASBESTOS CORPORATION LIMITED
 Stevens, Drummond & Gifford
 1918 Olympic Blvd.
 Suite 250
 Walnut Creek, CA 94596
 (510) 944-5550 (510) 256-9669

KAISER ALUMINUM & CHEMICAL
 Thelen, Harrin, et al.
 Two Embarcadero Center
 Suite 2100
 San Francisco, CA 94111
 (415) 392-6320 (415) 421-

AMERICAN ARRESTS COMPANY
 Vngl & Meredith
 456 Montgomery St., 28th Floor
 San Francisco, CA 94104
 (415) 398-0280 (415) 398-2828

MALTRY ELECTRIC SUPPLY CO., INC
 Walsworth, Franklin, et al.
 588 California St., Ste. 1335
 San Francisco, CA 94104
 (415) 781-7872 (415) 391-6258

OFF ENGINEERING COMPANY
 Walsworth, Franklin, et al.
 588 California St., Ste. 1335
 San Francisco, CA 94104
 (415) 781-7872 (415) 391-6258

((END OF REPORT))

SO.#

Y-2295

6601



1/2295 C30630 SF662188

STANDARD OIL CO., OF CALIF.
WESTERN OPERATIONS, INC. H-75585-R
ATTN: R.D. MURRAY
RICHMOND, CALIFORNIA

[illegible][illegible]

N1 FOR 2DYR TURBINE S/N Y2295
N2 COLLECT FROM STND OIL OF CALIF WESTERN OPERATIONS
INC TRAFFIC & DISTRIBUTION DEPT P.O. BOX 3495
SAN FRANCISCO, CALIFORNIA 94120
N3 REQUIRED BY 7-30-66 OR EARLIER

NAT.	CATEGORY	PROJECT CODE	PRODUCT CODE	PRODUCT CODE	SERVICE PARTS	CUST. AGENT	COMMISSION
					DATE		
6	SF100431100				4/6/30	1	

Repair Order Initials	Date
<i>RB</i>	<i>2/3</i>
Draftsman's Initials	Date
<i>T.B.</i>	<i>2-2-66</i>
<i>110</i>	<i>2-3</i>

Y1295 C30128 SF662059

						WHEN REMITTING REFER TO					
						GENERAL ORDER					
DATE						NUMBER					
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C30128						SF 662059					
PL CODE						INVOICE DATE					
NO. OF											
COUNTRY											
SHIPPED FROM						DATE SHIPPED					
HOW SHIPPED											
SCHEDULED SHIPPING DATE											
TRANSPORTATION CHARGES											
1. S&T POINT				3. COLLECT				5. CHARGE			
2. W*				4. PREPAID				6. NO CHARGE			
2 DES*ION											

STANDARD OIL COMPANY OF CALIF
ATTN: R D MURRAY - RICHMOND REFINERY
RICHMOND, CALIFORNIA

TAX		USE		HFG SHIP		DEST		REQ METHOD OF SHIP		ADDITIONAL MARKS		TERMS NET 30 DAYS UNLESS OTHERWISE INDICATED BELOW		V V		S M		CH	
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0500X		SEMER04						N1								146JLH			

N1 ITEM #1 SHIP AIR PARCEL POST SPECIAL DELIVERY, ITEM
#2 THRU #4 BY PARCEL POST REGULAR.
N2 ITEM #1 FOR 2AYRO S/N U-2386, ITEM #2 FOR 2AYRPO
S/N U-2406, ITEM #3 FOR 2BYR S/N 15069 AND ITEM #4
FOR 2DYR TURB S/N Y-2295.

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D.C.	M								
SF100431100									
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00

ELLIOTT COMPANY

A DIVISION OF CARRIER CORPORATION

Jeannette

P.A.

PAGE OF

BUYER'S ORDER NO.	DATE	REQ. NO.	CONTRACT NO.	DATE INITIATED	S.O./M.O. SERIAL NO.
H-52549-R	9/19			9/19	14956

SOLD TO	Standard Oil Company of California Western Operations, Inc. 225 Bush Street San Francisco 20, California	SHIP TO	Standard Oil Company of California Western Operations, Inc., H-52549-R Attention: Mr. R. W. Aldrich Richmond, California

ARK: H-52549-R

TERMS: NET 30 DAYS
(NO CASH DISCOUNT ALLOWED)

TRANSPORTATION

F.O.B.
☒ SHIPPING POINT
☐ DESTINATION
☐ COLLECT
☒ PREPAID
☐ CHARGE
☐ NO CHARGE

WHEN REMITTING REFER TO

GENERAL ORDER NO. JA28-2270

INVOICE DATE INVOICE NO.

OTHER DEPT./DIV. G.O. NO.

SHIPPED FROM DATE SHIPPED

HOW SHIPPED

ROUTE

CAR INITIALS AND NO.

REQUESTED METHOD OF SHIPMENT

FREIGHT

☐ RAIL ☐ MOTOR ☐ AIRPARCEL POST ☐ RAIL ☐ AIR ☐ OTHER

EXPRESS Roadway

☐ RAIL ☐ AIR Ringsby

SCHEDULED SHIPPING DATE

ITEM	QUAN. ORDERED	DESCRIPTION	S.O.-M.O. SERIAL NUMBER	PRO- DUCT CODE	CAT. DWG. INDEX CODE OR ENG. NUMBER	F.I.C.	MAT'L	PATT. NO. - DWG. NO. AND/OR DETAILED DESCRIPTION
1	16	2 SETS PACKING RING ASSEM. 1-37-6273	512		634159-7	2		
2	1	SEAL 1-32-6388			646704-1	5		

Do Not Insure.

WK-50

Repair Order Initials

Date

Draftsman's Initials

Date

9-27-63

9-26-63

JC-5

2-1-

ELLIOTT COMPANY
A DIVISION OF CARRIER CORPORATION

NORMAL MAINTENANCE PARTS LIST

for

Type 2D YR Turbine

G.O. No. 1418-0273 Serial No. 4-2295 S.O. No. 4-2295 Instruction Book 100

For STANDARD OIL CO. OF CALIFORNIA PO. # HAR 6-3016 Item

Item	Part Number	Catalog Number	Req'd Per Unit		Item	Part Number	Catalog Number	Req'd Per Unit	
Bearing Liner (Upper Half)	523	<u>625781-5</u>	<u>2</u>		Follower	574	<u>646107-1</u>	<u>1</u>	
Bearing Liner (Lower Half)	522	<u>625781-6</u>	<u>2</u>		Pin	677	<u>646771-1</u>	<u>1</u>	
Oil Ring	624	<u>640927-1</u>	<u>4</u>		Connection	654	<u>646637-1</u>	<u>1</u>	
Carbon Ring Assy. (Standard)	512	<u>634159-7</u>	<u>8</u>		Pin	675	<u>646643-2</u>	<u>1</u>	
Carbon Ring Assy. (Huhn)	512	<u>—</u>	<u>—</u>		Retaining Ring	673	<u>P27E16</u>	<u>4</u>	
Valve & Stem Assy. (Governor)	651-2-3	<u>616899-145</u>	<u>1</u>		Pin	672	<u>646643-1</u>	<u>1</u>	
Valve	651	<u>634812-2</u>	<u>1</u>		Shoulder Bolt	805	<u>—</u>	<u>1</u>	
Stem	652	<u>647680-12</u>	<u>1</u>		Block	808	<u>—</u>	<u>2</u>	
Pin	653	<u>T-1021875</u>	<u>1</u>		Connection	807	<u>—</u>	<u>1</u>	
Pin	579	<u>—</u>	<u>1</u>		Weight Assembly	665	<u>634349-7</u>	<u>3</u>	
Sleeve	580	<u>—</u>	<u>1</u>		Spring (Governor)	667	<u>646587-1</u>	<u>1</u>	
Lockwasher	581	<u>—</u>	<u>1</u>		Ball Bearing	662	<u>692358-2</u>	<u>1</u>	
Nut	582	<u>—</u>	<u>1</u>		Bearing Case	663	<u>646576-1</u>	<u>1</u>	
Lockwasher	584	<u>—</u>	<u>1</u>		Spindle Assembly	700	<u>629379-11</u>	<u>1</u>	
Valve Seat	567	<u>636413-5</u>	<u>1</u>		Seal	681	<u>646704-1</u>	<u>1</u>	
Trip Pin	938	<u>646374-1</u>	<u>1</u>		Spring Seat	666	<u>646693-3</u>	<u>1</u>	
Adjusting Nut	937	<u>647793-1</u>	<u>1</u>		Connection	655	<u>646572-1</u>	<u>1</u>	
Trip Spring	940	<u>641554-1</u>	<u>1</u>		Adjusting Nut	668	<u>646575-1</u>	<u>1</u>	
"U" Lock Staple	942	<u>650093-1</u>	<u>2</u>		Diaphragm	1476		<u>1</u>	
Ball Bearing (Rotor Locating)	623	<u>647226-2</u>	<u>1</u>		Spring	1484		<u>1</u>	
Retaining Ring	622	<u>P27G38</u>	<u>1</u>		Adjusting Screw	1485		<u>1</u>	
Spring	540	<u>646687-2</u>	<u>1</u>		Ball Bearing	1487		<u>1</u>	
Plunger Assembly	936	<u>647517-4</u>	<u>1</u>		Valve Stem	1491		<u>1</u>	
Knife Edge	934	<u>650293-1</u>	<u>1</u>		Pin	745		<u>1</u>	
Knife Edge	963	<u>692000-1</u>	<u>1</u>		Block	746		<u>1</u>	
Roll Pin	964	<u>691999-1</u>	<u>1</u>		Bellows Assembly	1363		<u>1</u>	
Valve Stem Packing	573	<u>637387-2</u>	<u>1</u>		Rod End	1371		<u>1</u>	
Valve & Stem Assy. (Double Seated)	916	<u>633792-10</u>	<u>1</u>		Ball Bearing	1379		<u>2</u>	
Valve & Stem Assy. (Single Seated)	930	<u>—</u>	<u>1</u>		Bearing (Heim)	1382		<u>1</u>	
Spring	922	<u>645953-1</u>	<u>1</u>		Oil Pump				
Spring (Resetting)	928	<u>647629-1</u>	<u>1</u>		Oil Pump Coupling				
					Oil Pump & Coupling				
					Pin	1038		<u>1</u>	
					Heim Bearing	1046		<u>2</u>	
					Pin	1054		<u>1</u>	
					Pin	833		<u>2</u>	
					Pin	834		<u>3</u>	
					Link	1055		<u>1</u>	

1. Used on Units having Standard Governor, "F" Governor, "O" Governor, "W" Governor, or "PG" Governor.
2. Used on Units having Standard Governor, "F" Governor or "P" Governor.
3. Used on Units having "O" Governor or "W" Governor, or "F" Governor — Except Variable Ratio Linkage
4. Used on Units having "O" Governor or "W" Governor.
5. Used on Units having "P" Governor.
6. Used on Units having "POc" Governor.
7. Used on Units having "O" or "POc" Governors or "W" Governors.
8. Used on Units having "PG" Governor.
9. Used on Units having Standard Governor, "F" Governor, "O" Governor or "W" Governor.
10. Used on Units having "F" Governor with Variable Ratio Linkage

R. R. HENRY

c-9

ENGINEERING DEPARTMENT

SINGLE STAGE TURBINE AND/OR GEAR DESCRIPTIVE SPECIFICATIONS

DATE 6/27/61	GENERAL ORDER JY28-0273	SHOP ORDER Y-2295
INLET CONN. SIZE 6" GOV. VALVE SIZE 5 1/2" R.H. EXHAUST CONN. 10 1/2" TURB. ROT. L.H. 2263 (FROM GOV. END) ROTOR FOR 2263 R.P.M. MAX. TRIP TYPE GOV. STD (LARGE) SPEED CHANGER HAND () HAND VALVES UPPER LOWER INSUL. AND JACKETING STD. STAINL. BASEPLATE SOLEPLATE COUPLING H.S. COUPLING L.S. GEAR OFFSET L.H. R.H. (FROM GOV. END) GEAR RATIO	GEAR NAME PLATE DATA GEAR SERIAL NO. RATING SIZE SERVICE FACTOR H.S. L.S. INSTR. BOOK NO. 200 SPECIAL	TURBINE NAME PLATE DATA TURBINE SERIAL NO. Y-2295 TYPE 2D4R HP 370 R.P.M. 1750 INLET 110 PSIG TEMP. 344 DEG. F EXH. 25 PSIG EXH. IN-HC-ABG TRIP SETTING 2100 R.P.M. NEMA CLASS TURB. I INSTR. BOOK NO. 100 SPECIAL

<u>OIL SYSTEM</u>		
TURB. BRGS. R.O. ☒	PIPING MAT'L.	OIL RESERVOIR
OIL PUMP SIZE ☐	GAL./100 R.P.M. DRIVEN FROM	
AUX. OIL PUMP	OIL COOLER	OIL FILTER

PAINTING REQUIREMENTS: STD.

SHIPPING PREPARATION: STD., CLASS A, SP-109, GR. 2, SLUSHING SP-501

SPECIAL CONSTRUCTION:

✓ *FORWARD REVERSE OVERS (ONE P.W. CRG.)*
 602469
 OUTLINE **602463**
DRIVEN MACHINE ☒ FURNISHED ☐ NOT FURNISHED*PUMP*

AUXILIARY APPARATUS:

REVISIONS	
BY	DATE
<i>FJB</i>	<i>8-14-61</i>
<i>FJB</i>	<i>8-28-61</i>

JUN 27 1961

C-8

EM O.	NAME OF PART	F.I.C. P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.P.O. P.B.M. A.M.A.	QUAN
	2 DYR TURBINE	B/M	Y2295 - 40					B/M	1
2	NAME PLATE (TURBINE)	H	691496 -1			STNLS. STL.	PURCHASED STAMP AS FOLLOWS:		1
3				TURBINE TYPE 2 DYR	SERIAL NO. Y2295				
4				HP 370 INLET 1/10		R.P.M. 1750 PSIG.	TEMP. 384° F.		
5				EXH. 25 TRIP SETTING 210 0		PSIG.	EXH — IN. HGABS. R.P.M.		
6				INSTRUCTION BOOK	NO. 100				
7	DRIVE SCREWS (FOR ABOVE)	H	P22C22			STNLS. STL.	#6 x 1/4" LG. TYPE "U"		4
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18						ORDER COMPLETE DATE 8-16-61			
19									
20	ASSEMBLY								1
21	TEST						AS PER SP-30		1
22	INSPECTION								1
23	PAINTING						AS PER PS-402		1
24	SLUSHING AND SHIPPING PREP.						STD. CLASS A SP-109 GR. 2 SLUSHING		1
25							SP-501		

CATALOG
NO.

Y2295

LINE
NO.

602464

O.

Y2295

RECORD
NO.

JY28-0273

ONE TYPE 2 DYR TURBINE #Y2295

FOR: STANDARD OIL CO. OF CALIFORNIA

ASSEMBLY
BILL OF
MATERIAL

NAME OF PART	F.I.C. P.O. P.B.M.	CATALL NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	F.I.C.-P.O. P.B.M. A.M.A.	QUAN.	✓
Casing Assem.	M	601455 -38				B/M		1	
Packing Case Assem.	M	625384 -4				See Note B/M		2	
Note:-See Piping Diagram Dwg. For Parts To Be Assembled On Pkg. Cases Before Bolting Pkg. Cases to Casing.									
Cap Screw (Pkg. Cases to Casing)	H	P23T226			-248A-2	5/8"-11 x 1" long Knurled Socket Hd.		4	
Cap Screw (Pkg. Cases to Casing)	H	P23T227			-248A-2	5/8"-11 x 1-1/4" long Knurled Socket Hd.		12	
Piping Diagram (Leakage)	B/M	612619 G1				B/M		1	
			*						
Sentinel Valve	M	P66J12				3/4" Set at 55° Purchased		1	
Plug (For Hand Valve Opening)	M	646659 -1						2	
Gasket (For Above)	H	646126 -7				Purchased		2	
Bearing Liner (Upper Half)	M- f	625781 -5				Purchased		2	
Bearing Liner (Lower Half)	M- f	625781 -6				Purchased		2	
Bearing Case (Steam End)	B/M	617531 G13				B/M		1	
End Support	M	646560 -6						1	
Mach. Bolt (Brg. Case to Support)	H	P10C263			-162A-2	5/8"-11 x 2" long Hex. Hd. S. F.		2	
Lockwasher (For Above)	H	P25A49			Steel	5/8" (.203" x .156) "Kantlink"		2	
Nuts (For Above)	H	P11A16			Steel	5/8"-11 Hex. S.F.		2	
Spacer (Brg. Case to Casing)	H	649581 -2			Steel	Make From Purchased Washer 649581-4		4	
Cap Screw (Brg. Case to Casing)	H	P23T289			-248A-2	7/8"-9 x 1-3/4" Long Knurled Socket Hd.		4	
Pin (Brg. Case To Casing)	H	T-10218 -84						2	

TALOG NO.	Y2295-40	Type	2 DYR	Turbine	S.O. NO.
	602464				W.O. NO.
	Y2295	For:-	STANDARD OIL CO. OF CALIFORNIA		QUAN.
CORD NO.	JY28-0273				DATE

QTY.	NAME OF PART	F.I.C. P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.-P.O. P.B.M. A.M.A.	QUAN.	✓
	Nozzle Ring	M	624906 -1	Note: Ream Nozzles as Specified Below					1	
7					633877 -14	REGULAR NOZZLES 69°/75°-20°-L.H. LOCATIONS #170 8 INCL. #11-12-13-14- 21-22-23-24			16	
8										
9						No 1ST OVER. NOZZLES				
0						No 2ND OVER. NOZZLES				
1										
2				Note:-See Reaming Diagram 633783 for locations of above nozzles						
3	Cap Screw (For Nozzle Ring)	H	P23T226			-162A-2	5/8"-11 x 1" long Knurled Socket Hd.		24	
4	Cap Screw (For Nozzle Ring)	H	P23T259			-162A-2	3/4"-10 x 1-3/4" long Knurled Socket Hd.		24	
5	Lockwasher (For Nozzle Ring)	H	P25R28			Cad. Pl. Steel	3/4" Shakeproof		24	
5	Lockwasher (For Nozzle Ring)	H	P25R26			Cad. Pl. Steel	5/8" Shakeproof		24	
7										
3										
	Bucket Holder Assembly	M	624911 -9				LOCATIONS PER ARRGT. #6 AS SHOWN ON DWG. 624911 B/M		2	
	Cap Screw (For Bucket Holder)	H	P23T202			-162A-2	1/2"-13 x 2-1/2" lg. Knurled Socket Hd.		6	
	Lockwasher (For Above)	H	P25R24			Cad. Pl. Steel	1/2" Shakeproof		6	
	Spacer (For Bucket Holder)	H	645997 -1						6	
	Trip Pin Spring	H	641554 -1				Purchased		1	
	Trip Pin	H	640374 -1						1	
	Trip Pin Adj. Nut	H	647793 -1						1	
	Trip Pin Lockwire	H	650093 -1						2	
	Trip Pin Washer	H	E-62901 -1						1	
	Rotor Assembly	B/M	613459 -44				L.H. Rot. B/M		1	
	Packing Ring Assembly	M	634159 -7				B/M		8	

TALOG NO.	42295-40	Type	2DYE	Turbine	S.O. NO.
	602467				W.O. NO.
QTY.	42295	For:-	STANDARD OIL CO. OF CALIFORNIA		QUAN.
CORD NO.	JY 28-0273				DATE
REP. BY	E.N.	DATE			

ITEM NO.	NAME OF PART	F.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.-P.O. P.S.M. A.M.A.	QUAN.	✓
	Oil Rings	H-8	640927-1						4	
52	Bearing Ped. Assem. (Exh. End)	B/M	601987 G3				B/M		1	
53	Spacer (Ped. To Casing)	H	649581-2			Steel	Make From Purchased Washer 649581-4		4	
54	Stud (Ped. To Casing)	H	646006-5						2	
55	Taper Pin (For Above Stud)	H	P36H195			Steel	#5 x 2" long		2	
56	Cap Screw To Casing)	H	P23T289			-248A-2	7/8"-9 x 1-3/4" Long. Knurled Socket Hd.		4	
57	Pin (Ped. To Casing)	H	T-10218-84						2	
58										
59	Steam Chest Assembly	B/M	603156-321				B/M		1	
50	Valve and Stem Assem.	M	616899-145				5 1/2" Assem. in Above Steam Chest B/M		1	
51	Valve Seat	M	636413-5				5 1/2" Assem. in Above Steam Chest		1	
52	Pin (Stm. Chest To Casing)	H	T-10218-16						2	
53	Nuts (Stm. Chest To Casing)	H	P11A17			Steel	3/4"-10 Hex. S.F.		10	
55										
56	GOVERNOR	B/M	629381 G10				B/M		1	
57										
58	Governor Weight	M	634349-7						3	
59										
60	Governor Levers	B/M	625774 G13				B/M		1	
61	ALVOR LUBRICATOR	M	P6089				PURCHASED		2	
62	ADAPTER (FOR ABOVE)	M	649760-1						2	
63	PIPE NIPPLE (FOR STM. END BRG. (BA))	H	P41Y21				1/4" SCH. 80 x 3" LG.		1	
64	PIPE NIPPLE (FOR EXH. END PED.)	H	P41Y11			171	1/4" SCH. 80 x 2" LG.		1	
65	Assembly								1	

CATALOG NO.	Y2295-40		Type	2 DYE	Turbine	S.O. NO.
	602464					W.O. NO.
ITEM NO.	Y2295	For:-	STANDARD OIL CO. OF CALIFORNIA			QUAN.
RECORD NO.	JY 28-0273					DATE

[illegible]

ATACLOG
617531-413

BEARING CASE ASSEMBLY

**S.O.
NO.**

NO. 11

(WITH COOLING JACKET)

W.O
H9.

Q.

570. Gov. - Ring Oiled

QVAN

RECORD
NO.

BYRN-CYR-DYR-EYR

DATE _____

NAME OF PART	P.I.C. P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	P.I.C.-P.O. P.B.M. A.M.A.	QUAN.
WFT	M	624972 -1						1
DISK	M	624988 -9				B/M		1
DISK	M	624989 -9				B/M		1
SET SCREW	H	P23A30			STL.	#10-24 X 1/4" LG. CUP POINT.		6
SLEEVE	M	647966 -1						3
SHRINK RING	M	636051 -1						2
SHRINK RING	M	636051 -2						1
KEY	H	633074 -37						2
ASSEMBLY		613459 -44				ASSEMBLY OF ABOVE ITEMS.		X

CATALOG NO. 613459-44	S.O. NO.
Rotor Assembly	W.O. NO.
L. H. Rot. - MAX. TRIP 4263 R.P.M.	QUAN.
RECORD NO.	DATE
2DYE	d-15

QTY	NAME OF PART	P.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.P.O. P.S.M. A.M.A.	QUAN
1	PEDESTAL ASSEM.	M	601987 -7				B/M		1
2	PIPE PLUG	H	P40E11			STL.	1/4" SOLID SQ. HD.		2
	PIPE PLUG	H	P40H14			C.I.	3/4" COUNTERSUNK		1
1	PIPE PLUG	H	P40H15			C.I.	1" COUNTERSUNK		1
1	FLANGE	M	635501 -2						1
3	GASKET	H	649709 -1						1
1	MACH. BOLT	H	P10A54			STL.	5/16"-18 X 7/8" LG. HEX HD. - S.F.		6
1	COOLING TUBE ASSEM.	M	635502 -5				B/M		1
9	PIPE PLUG	H	P40G11			STNLS S.	1/4" SOLID SQ. HD.		2

CATALOG

601987-G3

BEARING PEDESTAL
(EXHAUST END)BO
NO.LINE
NO.WO
NO.I.O.
NO.

QUAN.

RECORD
NO.RING OILED
"DYR" & "EYR"

DATE

2-16

REP. BY PRD DATE 7-15-59

NAME OF PART	P.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.-P.O. P.S.M. A.M.A.	QUAN.	V
ER	M	633811 -3				B/M		1	
OVERSPEED TRIP VALVE ASSEM.	M	633742 -10				B/M		1	
LEVER	M	629131 -7				B/M		1	
STEAM STRAINER	M	633805 -21						1	
RESETTING LEVER	M	633716 -4				B/M		1	
PACKING	H	637387 -2						1	
SPRING	H	647629 -1						1	
SPRING	H	645953 -1						1	
SPRING	H	646602 -1						1	
SPRING SEAT	H	645949 -1						1	
PIPE NIPPLE	H	P41240			-171	3/4" SCH. 80 X 8" LG.		1	
HOOD	M	624946 -3						1	
CONNECTION	H	646637 -1						1	
CONNECTION	H	646657 -1						1	
RETAINING RING	H	P27E20			STL.	TRUARC CRESCENT 5103-75		2	
BLOCK	H	646639 -2						2	
BLOCK	H	691879 -1						2	
MACH. BOLT	H	P106305			-162A-2	3/4"-10 X 2 1/4" LG. HEX. NO. S.F.		10	
JAM NUT	H	P13512			STL.	3/8"-16 HEX-S.F.		1	
JAM NUT	H	P13514			STL.	1/2"-13 HEX-S.F.		1	
CAP SCREW	H	P23T260			-248A-2	3/4"-10 X 2" LONG KNURLED SOCKET HEAD.		2	
CAP SCREW	H	P23T262			-248A-2	3/4"-10 X 2 1/2" LONG KNURLED SOCKET HEAD.		6	
STRAIGHT PIN	H	M36L386			-33	1/2" DIA. X 2 1/8" LONG.		1	
BUSHING	H	692071 -1						1	

CATALOG NO.	13156-G-7	STEAM CHEST PARTS.	S.O. NO.
		STD. GOV. WITH OR WITHOUT HAND SPEED CHANGER OR "PG" GOV.	W.O. NO.
		6"-250"	QUAN.
CORD NO.		"BYR"- "BYR"- "CYR"- "DYR"- "BYRH"- "EYR"- 1/2"E	DATE

QTY.	NAME OF PART	P.I.C. P.O. P.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	QTY. P.O. A.M.A.	QUAN.
2	WASHER	H	646652 -1						2
3	SELF TAPPING SCREW	H	P22E42			STL	1/4"-20 X 1/2" LONG HEX HEAD.		1
4	FOLLOWER	H	646107 -1						1
5	SET SCREW	H	P23A54			STL	1/4"-20 X 1/2" LONG CUP POINT		1
6	BUSHING	H	645950 -1						1
7	SELF TAPPING SCREW	H	P22D37			STL	#10-24 X 5/16" LONG TYPE STYLE "R" PARKER ROYAL		5
8	STREET ELBOW	H	P41L14			M.I.	3/4" -90° 150# SCREWED		1
9	SPRING SEAT	H	646660 -1						1
1	STRAIGHT PIN	H	T10218 -16			-39	1/2" DIA. X 3/4" LONG		1
3	COVER	M	628898 -3					3/M	1

TALOS
NO.

603/56-4-7

STEAM CHEST PARTS

S.O.
NO.

STD. GOV. WITH OR WITHOUT HAND SPEED CHANGER OR "16" GOV.

W.O.
NO.

6"-250"

QUAN.

ORD
NO.

"R" "B" "CIR" "DIR" "DIRH" "EIR" E.E.

DATE

BY RRU 8-22-58

C-1

ITEM NO.	NAME OF PART	P.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	P.I.C. P.O. P.S.M.	QUAN.
	SET SCREW	H	P23K136			STL	1/2-13 x 5/8" LG. NAILDRIVER		1
8.	GASKET	H	647866						1
9.	NOOD	M	646558						1
12.	LUBRICATOR	H	P70414				6mm STYLE WD. #2207 WICK FEED		1
7	GOV. SPINDLE & PARTS ASSEM.	B/M	629381					3/M	1
8.	BEARING CASE	M	646576						1
2.	STOP SCREW	H	650614						3
1.	GOV. CASE	M	646694						1
2.	CAP SCREW	H	P23T42			-162A-2	#10-24 x 1/2" LG. KNURLED SOC. NO.		3
3.	LOCKWASHER	H	P25Q15			STL	#10 SHAKEPROOF		3
4.	WEIGHT STOP	H	692444						3
			-2						

CATALOG NO.	1.29381-610	GOVERNOR	S.O. NO.
		LARGE STD. GOV. WITH NOLLOW BRAZED RIGID	W.O. NO.
		DESIGN SPINDLE & OIL LUBRICATED BEARING	QUAN.
RECORD NO.		STD. 1200" SPRING. 1/2" TURBINE	DATE

C-20

ITEM NO.	NAME OF PART	P.I.C. P.O. P.S.N.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C. P.O. P.S.N. A.M.A.	QUAN.
	GOV. SPINDLE ASSEMBLY	3/M	629381-25					3/M	1
7	CONNECTION	M	646572-1						1
3	JAN NUT	H	P13514						1
9	SPRING SEAT	M	646693-3						1
2	ADJUSTING NUT	M	646575-1						1
1	SEAL	H	646704-1						1
5	SPRING	M	646587-1						1
7	ASSEMBLY		629381-27				ASSEMBLY OF ABOVE ITEMS		X

CATALOG NO.	629381-27	GOVERNOR SPINDLE & PART ASSEMBLY	SG. NO.
		SMALL STD. GOV. WITH HOLLOW BRAZED RIGID DESIGN	WG. NO.
		SPINDLE & LUBRICATED BEARING, SPEC. 1200 * SPRING	QUAN.
RECORD NO.		Y.R.	DATE

c-21

QTY	NAME OF PART	P.I.C. P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	P.I.C. P.O. P.B.M. A.M.A.	QUAN
	SPINDLE	M	629379				B/M		1
1	BALL BEARING	M	692358						1
3	WASHER	H	691832						1
1	NUT	H	P12J10			5	1/4-28 HEX S.F.		1
	LOCKWASHER	H	P25517				1/4 SHARP ROOF		1
5	ASSEMBLY		629381				ASSEMBLY OF ABOVE ITEMS		X

CATALOG
NO.

629381-25

GOVERNOR SPINDLE ASSEM.

SO.
NO.WO.
NO.

SID. LARGE GOV. WITH HOLLOW BORED RIGID

DESIGN SPINDLE & BALL BRG. ASSEMBLY

QUAN

T.O.
NO.RECORD
NO.

"12" TURBINE

DATE

PLS 1-7-59

C-22

NAME OF PART	P.C. P.O. P.S.N.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.C.P.O. P.S.N. A.M.A.	QUAN.
BRACKET	M	634477 -1						1
BRACKET	M	647808 -1						1
PIN	H	646643 -2						1
RETAINING RING	H	P27E16						4
TAPER PIN	H	P36H162			STL.	#4 x 1 1/4" LG.		2
MAIN BOLT	H	P10A197			STL.	1/2" - 13 x 1 1/2" LG. HEX. NO. S.F.		2
CAP SCREW	H	P23T203			.162A2	1/2" - 13 x 2 3/4" LG. KNURLED Sec. NO.		1
LOCKWASHER	H	P25A44			STL.	1/2" (172 x 125) RANTLINK		2
PIN	H	646771 -1						1
PIN	H	646643 -1						1
LEVER	M	633789 -5						1
LOTTER PIN	H	P36A54			STL.	1/8" x 3/4" LG.		2
HAND WHEEL	M	ES-2008 -2						1
WASHER	H	P13514			STL.	1/2" - 13 HEX. S.F.		1
BRACKET	H	646582 -1						1
WASHER	H	T-60325 -1						1
TAPER DOWEL	H	M36K224			STL.	#6 x 1 3/4" LG.		1
CAP SCREW	H	P23T196			.162A2	1/2" - 13 x 1" LG. KNURLED Sec. NO.		2
STEM	H	646554 -5						1
SPRING	H	647629 -1						1

CATALOG NO. 125774-GR-13

GOVERNOR LEVER ASSEMBLY

S.O.
NO.

VARIABLE RATING 2" - 3" - 4" - 6" STM LN.

W.O.
NO.

STD. GOV. WITH HAND SPEED CHANGER

QUAN.

"CYR" "DYR" "EYR" & "BYRH"

DATE

CORD NO.

REP. BY RRU DATE 9-28-59

R. 19

DETAIL BILL OF MATERIAL

1 PAGES

PAGE NO. 1

C-23

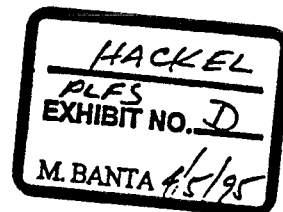
S.O.

C-2244

STANDARD OIL Co. OF
Purchaser
CALIF.

CALIFORNIA

State



1

DESIGN
INFO.

D-D-1

NORMAL MAINTENANCE PARTS LIST

for

Type 22YR PG. TurbineG.O. No. SF65-001A Serial No. C-2244 S.O. No. C-2244 Instruction Book 100For STANDARD OIL CO. OF CALIF. PO. # 514290 Item

Item	Part Number	Catalog Number	Req'd Per Unit	Item	Part Number	Catalog Number	Req'd Per Unit
Bearing Liner (Upper Half)	523	625781-5	2	Follower Pin	574 677	646107-1	1
Bearing Liner (Lower Half)	522	625781-6	2	Connection Pin	654 675	646637-8	1
Oil Ring	624	640927-1	4	Retaining Ring	673		4
Carbon Ring Assy. (Standard)	512	634159-7	8	Pin	672		1
Carbon Ring Assy. (Huhn)	512	-	-	Shoulder Bolt	805		1
Valve & Stem Assy. (Governor)	651-2-3	638149-28	1	Block	808		2
Valve	651		1	Connection	807		1
Stem	652		1	Weight Assembly	665		3
Pin	653		1	Spring (Governor)	667		1
Pin	579		1	Ball Bearing	662		1
Sleeve	580		1	Bearing Case	663		1
Lockwasher	581		1	Spindle Assembly	700		1
Nut	582		1	Seal	681		1
Lockwasher	584		1	Spring Seat	666		1
Valve Seat	567	629495-12	1	Connection	655		1
Trip Pin	938	640374-1	1	Adjusting Nut	668		1
Adjusting Nut	937	647793-1	1	Diaphragm	1476		1
Trip Spring	940	641554-1	1	Spring	1484		1
"U" Lock Staple	942	650093-1	2	Adjusting Screw	1485		1
Ball Bearing (Rotor Locating)	623	647226-6	1	Ball Bearing	1487		1
Retaining Ring	622	P27638	1	Valve Stem	1491		1
Spring	540	646687-2	1	Pin	745		1
Plunger Assembly	936	647617-4	1	Block	746		1
Knife Edge	934	650293-1	1	Bellows Assembly	1363		1
Knife Edge	963	692000-1	1	Rod End	1371		1
Roll Pin	964	691999-1	1	Ball Bearing	1379		2
Valve Stem Packing	573	637387-2	1	Bearing (Heim)	1382		1
Valve & Stem Assy. (Double Seated)	916	638268-8	1	Oil Pump	7		
Valve & Stem Assy. (Single Seated)	930	-	1	Oil Pump Coupling	7		
Spring	922	645953-1	1	Oil Pump & Coupling	7	647358-1	1
Spring (Resetting)	928	647629-1	1	Pin	1038		1
				Heim Bearing	1058	692784-1	6
				Pin	1059	692818-1	3
				Pin	1066	646771-4	1
				JAM NUT	1062	P14J19	1
				SPRING	1081	637982-3	1

- Used on Units having Standard Governor, "F" Governor, "O" Governor, "W" Governor, or "PG" Governor.
- Used on Units having Standard Governor, "F" Governor or "P" Governor.
- Used on Units having "O" Governor or "W" Governor, or "F" Governor - Except Variable Ratio Linkage
- Used on Units having "O" Governor or "W" Governor.
- Used on Units having "P" Governor.
- Used on Units having "POC" Governor.
- Used on Units having "O" or "POC" Governors or "W" Governors.
- Used on Units having "PG" Governor.
- Used on Units having Standard Governor, "F" Governor, "O" Governor or "W" Governor.
- Used on Units having "F" Governor with Variable Ratio Linkage

TURBO SEAL - X414-105
FEL PRO C-5 - X415-115
PLASTIC GASKET - X416-123
PLASTIC GASKET - X418-133
TITE SEAL - X419-110

SINGLE VALVE TURBINE APPARATUS SPECIFICATION

O. NO. J14K90		PURCHASER Standard Oil Co., of Calif.		USER same Richmond Refinery	
P. O. DATE 2-12-65		ADDRESS 225 Bush Street San Francisco, California		ADDRESS Richmond, California	
GEN. ORDER NUMBER SF65-0014					
TURBINE ROTATION FACING GOVERNOR	H.P. 202	TYPE TURBINE 2DYE	TURB. RPM 1800	STEAM RATE 66.2	EXHAUST FACING GOV. ☒ L.H. ☐ R.H. ☐ UP ☐ DOWN
	GEAR S.F.	TYPE GEAR	GEAR RPM	MINIMUM GEAR RPM	GEAR SHAFT-OFFSET FACING PINION ☐ L.H. ☐ R.H.
XXXXXX	DESIGN STEAM CONDITIONS 40	PSIG D&S	FTT 0	PSIG XXXXXX	DRIVEN MACHINE EM 125KW Gen
COUNTER- CLOCKWISE ☒	ELLIOTT CLASS I	SUITABLE 250	PSIG INLET 600	FTT 60	PSIG EXHAUST
YES	NO	STD	SPEC	NUMBER HAND VALVES ☒ NONE ☐ ONE ☐ TWO	HAND VALVE SETTINGS
				1890 RPM TO 1530 RPM	APPROX. RATE
				☐ DIRECT ☐ DELAYED ☐ IN ☐ SEPARATE	PSIG FIT PSIG/IN. HG. ABS
	☒			MAX. PSIG PSIG DIFF.	HP RPM APPROX. RATE
	☒			☐ AIR ☐ ELECTRIC TO PSIG SPEED RANGE INCREASE WITH AIR PRESS.	PSIG FIT PSIG/IN. HG. ABS
	☒			PAINTED STAINLESS STEEL	PURCHASER'S INSPECTION ☐ NONE ☐ SURF ☐ NO LOAD ☐ FULL LOAD ☐ WITNESS ☐ WITNESS
					PAINT REQTS. ☒ STD. ☐ SPECIAL
☒		☒			SHIPPING PREP ☒ STD. ☐ EXPORT ☐ EXPORT BOX
				85 of ☒ FRESH ☐ SALT ☐ BRACKISH	UNIT PRICE 13,506 CONTRACT PRICE 13,506
☒				☒ PLAIN ☐ DRIP RIM ☒ FABRICATED ☐ FLAT STEEL	TYPE PLANT Ref. NET WEIGHT 2300
				SPECIAL MAKE Fast or equal	DRAWINGS
	☒			CUSTOMER'S MATERIAL TAG # (ISSUED BY JNTE.)	PRINTS: QUAN. 5 TRANSPARENCY: QUAN. 1
				☐ HYDRAULIC ☐ PNEUMATIC PSIG TRIP PRESS	☐ APPROVAL ☒ RECORD ☒ JEANNETTE ☐ DISTRICT
	☒			☐ OPEN TYPE ☐ ENERGIZED TRIPPING	QUANT. INSTR. BOOKS 14 BY ☐ ISSUED ☐ DIST. ☒ JNTE.
				☐ SOLENOID ☐ CL. I. GP. D. ☐ DE-ENERGIZED TRIPPING	FIELD WORK ☒ NONE ☐ SUPT. ONLY DAYS
	☒			☐ PIPING ONLY ☐ COMPLETE GAUGES, VALVES ETC.	ENGR/CONTRACTOR none
	☒			☐ INLET ☐ EXHAUST	SALESMAN ABS #466
	☒				PRODUCT ENG. CHC 23FC06
PENALTY CONTRACT ☐ YES ☒ NO PENALTY DATE					

SPECIAL INSTRUCTIONS

Mark: P.O.# J14K90, Item T-706

Woodward PG governor, NEMA "D"

Bracket-type coupling guard for coupling between turbine & generator.

Composite drawings of turbine and generator for record purposes; mounting of turbine and generator on common fabricated steel base furnished by Elliott Company.

* Witness commercial no load test of turbine and then no load test of turbine and generator coupled for alignment.

Turbine to be capable of 227 HP, 1800 rpm with 45 psig - D&S - 0 psig

Furnish 1/4" IPS connections in each bearing cap for all makeup steam.

DATE REGISTERED 2-15-65	REG. CONTRACT SERVICES BY CT	REQUESTED SHIPPING DATE June 1965	SCHEDULED SHIPPING DATE (WK. 31) 6-4-65	SHOP ORDER/SERIAL NO. C-2244
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* NOT TO BE COMPLETED IN FIELD

FEB 17 1965 - E. B. P.

FEB 26 1965

ORIGINAL

ENGINEERING DEPARTMENT

SINGLE STAGE TURBINE AND/OR GEAR DESCRIPTIVE SPECIFICATIONS

DATE 23 FEB 65	GENERAL ORDER SF65-0014	SHOP ORDER C 2244
INLET CONN. SIZE 6 GOV. VALVE SIZE 5 1/2" DS EXHAUST CONN. L.H. 3/4" TURB. ROT. L.H. 3/4" (FROM GOV. END) ROTOR FOR 2500 R.P.M. MAX. TRIP TYPE GOV. PG SPEED CHANGER HAND 1 HAND JAMES UNDER COVER ANGUL AND MOUNTING STD. STYED. BASEPLATE ALUMINUM FABRICATED BASEPLATE UNDER TURBINE COUPLING STD. FAST #3B GOVERNOR STD. GEAR ORIGIN. L.H. 100 (FROM GOV. END) GEAR ORIGIN.	GEAR NAME PLATE DATA GEAR SERIAL NO. RATING SIZE SERVICE FACTOR H.S. L.S. INSTR. BOOK NO. 200 SPECIAL	TURBINE NAME PLATE DATA TURBINE SERIAL NO. C 2244 TYPE 20YR PG HP/KW 202 R.P.M. 1800 INLET 40 PSIG TEMP. 287 DEG. F. EXH. 0 PSIG TRIP SETTING 2070 R.P.M. CLASS TURB. I INSTR. BOOK NO. 100 OPENING

OIL SYSTEM

TURB. BRGS. ~~AND~~ F.F. PIPING MAT'L. **THIN WALL STEEL** OIL RESERVOIR **15 GAL**
TUBING

OIL PUMP SIZE **1X1 IMO** ~~DRIVEN FROM TURBINE~~ **DRIVEN FROM Turbine**

~~RECEIVER~~ OIL COOLER **RV-26** OIL FILTER **Cuno G**

PAINTING REQUIREMENTS: STD.
 SHIPPING PREPARATION: STD., CLASS A, SP-100, GR. 2, SLUSHING SP-301

SPECIAL CONSTRUCTION:

1/8" orifice in turb brgs
 Bracket type coupling guard for Fast #3B
 1/32" hole in pump shaft for coupling lubrication
 Gov. worm wheel ratio - 2.222 to 1

△ BASEPLATE TO BE DRIP RIM, FABRICATED, WITH DRAIN HOLE UNDER
 TURBINE AND GENERATOR

△ VALVE STEM ASSY - 638149-28
 VALVE SEAT - 629495-12

△ FURNISH 1/4" IPS OIL MAKE UP CONNECTIONS SIMILAR TO S.O. B2491
 B2511

TURBINE NAME PLATE DATA
(MAX. DESIGN CONDITIONS)

INLET **250** PSIG
 TEMP. **600** DEG. F.
 EXH. **60** PSIG
 FIRST CRITICAL **8560** R.P.M.

OUTLINE

DRIVEN MACHINE (FURNISHED ~~NO EXHAUST~~)**EM 125 KW Gen**

AUXILIARY APPARATUS:
 WOODWARD GOVERNOR - 403686
 GENERATOR - 403685
 COUPLING - 403684

REVISIONS

BY	DATE
△ CMC	26 FEB 65
△ CMC	3 MAR 65
△ RLS	4/9/65

APR 12 1965

10-5

3

B/M's

QTY.	NAME OF PART	P.L.C. P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.P.O. P.B.M. A.M.A.	QUAN.
1	2DYRPG TURBINE	B/M	C2244	- 40				B/M	1
2	NAME PLATE (TURBINE)	H	P6200A394			STNLS. STL.	PURCHASED STAMP AS FOLLOWS:		1
3			TURBINE NO. C2244				TYPE 2 DYRPG		
4			RATED CONDITIONS						
5			HP 202			MAX. SPEED 1800 R.P.M.	DESIGN CONDITIONS 2500 R.P.M.		
6			TRIP SETTING 2070 R.P.M.						
7			INLET PRESS. 40 PSIG			INLET PRESS. 250 PSIG			
8			INLET TEMP. 287 F.			INLET TEMP. 600 F.			
9			EXH. PRESS. 0 PSIG			EXH. PRESS. 60 PSIG			
10			EXH. PRESS. — IN HG. ABS			FIRST CRITICAL 8560 R.P.M.			
11			INSTRUCTION BOOK NO. 100						
12									
13	SCREWS (FOR ABOVE)	H.S.	P12223			STNLS. STL.	46-32 X 3/8 26		4
14	WASHERS (FOR ABOVE)	B/M	619257-GR50					B/M	1
15	COUPLING (H.S.)	REQ. NO. 403684					PURCHASED - FAST MODEL B SIZE A3		1
16	KEY (FOR DRIVING HALF COUPLING)		634916-170			55	12 X 3/4 X 3 5/8 26	M	1
17	COUPLING GUARD	B/M	635632-4				BRACKET TYPE	B/M	1
18	WASHERS (FOR ABOVE)	H	P25F23			STNLS. STL.	5/8" STD.		2
19	OIL COOLER	MS	P2275A020				PURCHASED GROSS R.V. 26		1
20	OIL FILTER	MS	P3516C010				PURCHASED CUNA TYPE G		1
21	OIL TANK	B/M	670665-GR1					B/M	1
22	OIL PIPING	B/M	619208-GR2					B/M	1
23	GENERATOR	REQ. NO. 403685	(TO BE MOUNTED ON BASE PLATE)				PURCHASED - BENAC II INCLUDES SEPARATE FLOOR MOUNTED EM GENERATOR PANEL		1
24	ASSEMBLY								1
25	TEST	(NO LOAD WITNESS OF TURB COUPLED FOR ALIGNMENT)					AS PER SP-30		1
26	INSPECTION								1
27	PAINTING						AS PER PS-402		1
28	SLUSHING AND SHIPPING PREP						STD. CLASS A SP-109 GR. 2 SLUSHING		1
29							SP-501		1

CATALOG NO.	C2244	ONE TYPE 2DYRPG TURBINE #C2244	ASSEMBLY BILL OF MATERIAL
NAME			
FOR	C2244	FOR STANDARD OIL CO. OF CALIF.	
CORD NO.	5865-0019		

DATE 3-2-65

MAR - 9 1965

1 PAGES

PAGE NO.

QTY.	NAME OF PART	P.I.C. P.O. P.S.N.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C. P.O. P.S.N. A.M.A.	QUAN.
	Casing Assem.	STD B/M	601455 -38				B.M.		1
2	Packing Case Assem.	MS	625384 -4				See Note B.M.		2
4	Note: See Piping Diagram Dwg. For Parts To Be Assembled On Pkg. Cases Before Bolting Pkg. Cases to Casing								
5	Cap Screw (Pkg. Cases to Casing)	HS	P23T226			162A-2	5/8"-11 x 1" long Knurled Socket Hd.		4
6	Cap Screw (Pkg. Cases to Casing)	HS	P23T227			162A-2	5/8"-11 x 1-1/4" long Knurled Socket Hd.		12
7	Piping Diagram (Leakage)	STD B/M	612619 G1				B.M.		1
8									
9	Sensor Valve	MS	P66J12				3/4" Set at 55 PSI Purchased		1
10									
1	Plug (For Hand Valve Opening)	MS	646659 -1						2
2	Gasket (For Above)	HS	646126 -7				Purchased		2
3	Bearing Liner (Upper Half)	MS	625781 -5				Purchased		2
	Bearing Liner (Lower Half)	MS	625781 -6				Purchased		2
5	SALE BEARINGS (THRU)	MS	647226 -6				PURCHASED		1
6	Bearing Case (Steam End)	STD B/M	618698 G11				B/M		1
7	LATCH ASSEM	MS	624944 -11				B/M		1
8	End Support	M	646560 -6						1
9	Mach. Bolt (Brg. Case to Support)	H	P10C263			162A-2	5/8"-11 x 2" long Hex. Hd. S. F.		2
10	Lockwasher (For Above)	H	P25A49			Steel	5/8" (.203" x .156) "Kantlink"		2
1	Nuts (For Above)	HS	P11A16			Steel	5/8"-11 Hex. S.F.		2
2	Spacer (Brg. Case to Casing)	HS	649581 -2			Steel	Make From Purchased Washer 649581-4		4
3	Cap Screw (Brg. Case to Casing)	H	P23T289			162A-2	7/8"-9 x 1-3/4" Long Knurled Socket Hd.		4
4	Pin (Brg. Case To Casing)	H	P36L228						2
5	SYM. END BRG. CASE REMACHINING		638707			DRILL & TAP SYM. END BRG. CASE AS SHOWN ON DWG 2-638707			1

CATALOG NO. C2244-40	Type 2 DYR PG Turbine	UNIT BILL OF MATERIAL
IO. C2244	For: STANDARD OIL CO. OF CALIF.	
RECORD NO. 5565-0014		

NAME OF PART	F.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	F.I.C.-P.O. P.S.M. A.M.A.	QUAN.	✓
Nozzle Ring	MS	C2249 -100	Note: Ream Nozzles as Specified Below			MAKE FROM 624906-1	MS	1	
				633847 -14	REGULAR NOZZLES - 694.750 - 20° L.H.			16	
						LOCATIONS #1 TO 8 INCL. & 11 TO 14 INCL. & #21 TO 24 INCL.			
						NO 1ST & 2ND NOZZLES			
						NO 2ND & 3RD NOZZLES			
			Note:-See Reaming Diagram 633783 for locations of above nozzles						
Cap Screw (For Nozzle Ring)	HS	P23T226			-162A-2	5/8"-11 x 1" long Knurled Socket Hd.		24	
Cap Screw (For Nozzle Ring)	HS	P23T259			-162A-2	3/4"-10 x 1-3/4" long Knurled Socket Hd.		24	
Lockwasher (For Nozzle Ring)	HS	P25R28			Cad. Pl. Steel	3/4" Shakeproof		24	
Lockwasher (For Nozzle Ring)	HS	P25R26			Cad. Pl. Steel	5/8" Shakeproof		24	
Bucket Holder Assembly	MS	624911 -9				LOCATE AS PER ARRG. #6 AS SHOWN ON DWG. 624911 B/M		2	
Cap Screw (For Bucket Holder)	HS	P23T202			-162A-2	1/2"-13 x 2-1/2" lg. Knurled Socket Hd.		6	
Lockwasher (For Above)	HS	P25R24			Cad. Pl. Steel	1/2" Shakeproof		6	
Spacer (For Bucket Holder)	HS	645997 -1						6	
Trip Pin Spring	HS	641558 -1				Purchased		1	
Trip Pin	HS	640374 -1						1	
Trip Pin Adj. Nut	HS	647793 -1						1	
Trip Pin Lockwire	HS	650093 -1						2	
Trip Pin Washer	HS	E-62901 -1						1	
Rotor Assembly	B/M	613459 -44				L.H. Rot.	B/M	1	
Packing Ring Assembly	MS	634159 -7					B/M	8	

TALOG NO. <u>C2249-40</u>	Type <u>2 DYP PG</u> Turbine	UNIT BILL OF MATERIAL
<u>C2249</u>	For: <u>STANDARD OIL CO. OF CALIF.</u>	
CORD NO. <u>5F65-0014</u>		

QTY.	NAME OF PART	P.L.C. P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.L.C. P.O. P.B.M. A.M.A.	QTY.
1	Oil Rings	H S	640927-1						4
	Bearing Ped. Assem. (Exh. End)	STD B M	601987-4				B/M		1
3	Spacer (Ped. To Casing)	H S	649581-2			Steel	Make From Purchased Washer 649581-4		4
4	Stud (Ped. To Casing)	H	646006-5						2
5	Taper Pin (For Above Stud)	H S	P36H195			Steel	5 x 2 1/2 long		2
6	Cap Screw To Casing)	H	P23T289			162A-2	7/8" x 1-3/4" Long. Knurled Socket Hd.		4
7	Pin (Ped. To Casing)	H	P36L228						2
8	BRG. PED. (EXH. END) RINACHINING		638708			DRILL & TAP BRG. PED. AS SHOWN ON DWG. 2-638708			1
9	Steam Chest Assembly	STD B M	603156-321				B/M		1
0	Valve and Stem Assem.	F	638149-28				5/16" Assem. in Above Steam Chest B/M		1
1	Valve Seal	MS	629495-12				5/16" Assem. in Above Steam Chest		1
2	Pin (Stm. Chest To Casing)	H	P36L226						2
3	Nuts (Stm. Chest To Casing)	H S	P11A17			Steel	3/4"-10 Hex. S.F.		10
4	GOVERNOR DRIVE ASSEMBLY	B/M	618477-99				B/M		1
	DOWNWARD SPG. GOVERNOR	RED. NO. 403686					PURCHASED		1
5	GOVERNOR LINKAGE ASSEM.	STD B/M	618074-24				B/M		1
7									
8									
9									
0		B/M							
1	OIL PUMP AND COUPLING	MS	647358-1				PURCHASED 1" x 1" IMC (R.H.)		1
2	REMOVING OIL PUMP COUPLING						NOTE: COUPLING TO BE REMOVED FROM PUMP AND TO BE PLACED IN STOCK AS CAT. # 647360-2		
3	DRILLING (PUMP SHAFT END)						DRILL 1/32" DIA. HOLE IN PUMP ON END OF ABOVE PUMP SHAFT.		1
4	COUPLING	M	647360-5				PURCHASED - FOR USE BETWEEN IMC PUMP AND GOVERNOR DRIVE ASSEM.		1
5	Assembly								1

TALOG NO.

C 2244

Type 2 DYRPG Turbine

JTLINE NO.

UNIT
BILL OF
MATERIAL

C 2244

For: STANDARD OIL CO. OF CALIF.

CORD NO.

SF 65-0014

REP. BY E.N. DATE 3-2-65

MAR - 9 1965

3 PAGES

PAGE NO. 3

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO. 619257-GR50		PART NAME BASEPLATE		F.I.C.		APPARATUS DYR TURBINE		DRAWING NO.		
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	MAKE FROM Matl. Spec.	DESCRIPTION	R.I.C.	QUAN.
1	BASEPLATE ASSEM.	619257-10	B/m	10			1	B/m		
2	MACH. BOLT	P10A255	5/8"-11 x 1" Lg.	11		H	STL			
4	MACH. BOLT	P10A258	5/8"-11 x 1 3/4"	12		H	STL			
6	MACH. BOLT	P10A333	7/8"-9 x 1 3/4"	13		H	STL			
4	TAPER DOWEL	M36K288	#8 x 2 3/4"	14		HS	STL			
4	SHIM	P835D051		17		H	-46A			
4	SHIM	P835D052		18		H	-46A			
2	SHIM	P835D053		19		H	-46A			
1	SHIM	P835D054		20		H	-46A			
8	SHIM	P835D021		21		H	-46A			
8	SHIM	P835D022		22		H	-46A			
4	SHIM	P835D023		23		H	-46A			
2	SHIM	P835D024		24		H	-46A			
ORDER NO.		PART NO. 619257-GR50		DISTRIBUTION				Prepared By <u>LY</u>		
QUANTITY						Date <u>3-29-65</u>				

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO.		PART NAME		F.I.C.	APPARATUS	DRAWING NO.				
619257-10		BASE PLATE ASSEM			DYR TURBINE					
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/M	F.I.C.	MATL. SPEC.	DESCRIPTION	R.I.C.	QUAN.
2	CHANNEL	619257-1		1			C362-083	8" @ 13.75"/FT	M	74.000
3	CHANNEL	619257-2		2			C362-083	8" @ 13.75"/FT	M	19.500
2	CHANNEL	619257-3		3			C362-093	9" @ 13.4"/FT	M	23.250
2	PLATE	619257-4		4			P45-190	1 3/4" x 4 1/2" x 23 1/2"	M	
2	BAR	619257-5		5			F34-236	1" x 6"	M	7.000
1	BAR	619257-6		6			F34-224	1" x 4"	M	11.250
X	ASSEMBLY	619257-10	Assem Above	10						

ORDER NO. **PART NO.** **DISTRIBUTION** **Prepared By:** LK

619257-10 THS Date: 3-29-65

QUANTITY

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - **DETAIL** - PARTIAL - STANDARD

Carrier Corporation

185
195

ORDER NO.	PART NO. 670665-6R1	DISTRIBUTION	Prepared By J.B. SHASTER (WAB)
QUANTITY			Date 7-20-64
DATE REQUIRED			7-21-64

MANUFACTURING BILL OF MATERIAL
APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO. 670665-20		PART NAME OIL TANK WELDMENT (75 GAL.)		F.I.C.		APPARATUS TURBINE		DRAWING NO.					
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	7	Matl. Spec.	DESCRIPTION	U/ M	R.I.C.	QUAN.	U/ M
1	SHEET	670665-1		1			5	L46 -125	(116R) 26" X 32"		H		
2	SHEET	670665-2		2			5	L46 -125	(116R) 11 3/4" X 15"		H		
1	PLATE	670665-3		3			5	P45 -020	(74) 15" X 26 3/4"		M		
1	AIR VENT ASSEMBLY	692708-6	B/M	4		H							
1	BAR	670665-5		5			5	F34 -030	(3/16 X 3/4)	H	M	26.000	
1	SUPPORT	693115-1		7			5	P45 -020	(1/8 X 3 7/8" X 7 7/8"		M		
1	HALE COUPLING	P43F16	1 1/2-3000*	8		H							
1	PIPE	670665-10	PARIN ENDS	10			5	Y171 -004	(1/4-40)	H	H	7.500	
1	PIPE	670665-11	THD. ONE END	11			5	Y171 -403	(1-80)	H	H	13.750	
1	HALE NIPPLE	P41T83	3/4" S. 80 X 2 1/2"	12		H		-171					
1	HALE COUPLING	P42F14	1"-3000*	14		H		FG.S.					
1	COUPLING	P42F13	1"-3000*	15		H		FG.S.					
X	ASSEMBLY	670665-20	ASSEM. OF ABOVE ITEMS	20									

ORDER NO.	PART NO. 670665-20	DISTRIBUTION TAS	Prepared By J.R. SHUSTER (WAS)
QUANTITY			Date 7-20-64
DATE REQUIRED			7-21-64

1965

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

A. Division

Senior Carpenter

PART NO.		PART NAME		F.I.C.		APPARATUS		DRAWING NO.	
619208-6A2		DIL PIPING		DVRAG		TURBINE			
QUAN	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/M	F.I.C.	MAKE FROM	R.I.C.	QUAN
1	TUBING	619208-2	CUT & BEND TO SUIT	2			T48-104 1" OD - 16' long	C H	14000
1	TUBING	619208-3		3			T48-017 1/2" OD - 16' long	C H	6000
1	TUBING	619208-4		4			T48-066 3/4" OD - 18' long	C H	7000
1	TUBING	619208-5		5			T48-055 1 1/2" OD - 20' long	C H	9000
1	CHECK VALVE	PL6B1A	1" 125#	7		HS	Br		
1	RELIEF VALVE	PL5D11	3/4" 125# SET @ 15#	8		MS	Br		
1	GLOBE VALVE	PL2A11	1/2" 125#	9		H	Br		
1	HAIR NIPPLE	PA1T40	1/4" 80 x 1 1/2"	10		H	121		
1	OIL PRESS GAUGE	P52A19	3 1/2" DIAL GRAV. 0-20#	11		H			
3	TUBE COUPLING	PA7A35	1" M	13		H	310		
1	TUBE COUPLING	PA7B34	1" F	14		H			
2	TUBE COUPLING	PA7A33	3/4" M	15		H			
1	TUBE COUPLING	PA7B31	1/2" F	16		H			
1	TUBE COUPLING	PA7A32	3/4" M	17		H			
2	TUBE ELBOW	PA7G24	1" 90° M	19		H			
1	TUBE ELBOW	PA7F18	1" 45° F	20		H			
1	TUBE ELBOW	PA7G20	3/4" 90° M	21		HS			
ORDER NO.		PART NO.		DISTRIBUTION				Prepared By: <u>W. R. R.</u>	
		619208-6A2		PLS.				Date: <u>2-16-65</u>	
QUANTITY								3-9-65	
DATE REQUIRED									

1965

MANUFACTURING BILL OF MATERIAL

A Division

nler Corporation

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO.		PART NAME		TYPE		F.I.C.		APPARATUS		DRAWING NO.	
619208-622		D.L. PIPING						PIPELINE			
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/A	F.I.C.	MADE FROM	DESCRIPTION	R.I.C.	QUAN.	
2	TUBE ELBOW	P47618	1/2 x 1/2 90°	28		H					
2	DRIFTER PLUG	692729-5	1/2 DRIFTER	26		H					
1	ELBOW	P41A14	1" 90° 150°	28		H		M1			
1	STREET ELBOW	P41L13	1/2" 90° 150°	29		H		M1			
1	STREET ELBOW	P41L15	1" 90° 150°	30		H		M1			
1	PIPE NIPPLE	P41254	1" 80 x 9"	34		P.R.		121			
1	PIPE NIPPLE	P41239	1/2" 80 x 8"	35		H		121			
1	REDUCING BUSHING	P41V16	3/4 x 1/2	38		HS		376			
2	MACH BOLT	P10A51	5/16 - 18 x 1 1/2 MAX 40	41		H		376			
2	NUT	P11A11	5/16 - 18 Hex	42		HS		376			
ORDER NO.		PART NO.		DISTRIBUTION				Prepared By: <u>WRE RAN</u>			
		619208-622		PLS				Date: <u>2-16-65</u>			
QUANTITY								3-9-65			
DATE REQUIRED											

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

17-2

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT DETAIL - PARTIAL - STANDARD

A Division Miller Corporation

PART NO.		PART NAME		F.I.C.		APPARATUS		DRAWING NO.		
618477-6A-9		GOVERNOR DRIVE ASSEM.				YR. TURBINE				
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	Mat. Spec.	DESCRIPTION	R.I.C.	QUAN.
1	HOUSING	618135-1		1		M				
1	WORM WHEEL	636733-2		4			5 R78-225	2 1/4" DIA	A M	2.875 R
1	WORM WHEEL	636732-3		8		M				
1	KEY	641388-120		12		H				
1	LOCKWASHER	P28A14		13		H				
1	LOCKNUT	P28B14		14		H.S.				
1	OIL SLINGER	641723-51		15		M				
1	DIRECTION ARROW	650674-1		16		H				
2	DRIVE SCREW	P22B22		17		H				
1	WASHER	648803-1		18		M				
1	WASHER	648803-2		19		M				
1	COTTER PIN	P36A57		20		H				
1	OIL FEEDER	648561-1		21		H				
1	TRIP BODY	638086-1		22		M				
ORDER NO.		PART NO.		DISTRIBUTION				Prepared By: CEN.		
		618477-6A-9						Date: 7-2-64		
QUANTITY										
DATE REQUIRED										

618477-6A-9

MANUFACTUR BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT DETAIL PARTIAL - STANDARD

PART NO.		PART NAME		P.I.C.		APPARATUS		DRAWING NO.		
618477-GR-9		GOVERNOR DRIVE ASSEMB.				YR TURBINE				
QUAN.	PART NAME	PART NO.	REFERENCE OR. DRAWING NO.	ITEM NO.	U/M	P.I.C.	MAKE FROM	DESCRIPTION	R.I.C.	QUAN.
1	SET SCREW	P23K134		27		HS				
8	CAP SCREW	P23T136		28		H				
1	SHIM	P835C510		29		H				
1	SHIM	P835C511		30		H				
1	SHIM	P835C512		31		H				
1	SHIM	P835C513		32		H				
4	MACH. BOLT	P10A176		33		H				
2	TAPER POWER	M36K224		34		HS				
1	KEY	P37A14		41		H				
1	BRACKET	638089-5		42		F				
8	CAP SCREW	P23T80		44		H				
8	LOCK WASHER	P25A31		45		H				
4	LOCK WASHER	P25A39		46		H				
4	STUD	P50A13		47		H				
4	NUT	P11A12		55		HS				
ORDER NO.		PART NO.		DISTRIBUTION				Prepared By CSN.		
		618477-GR-9						Date 1-2-64		
QUANTITY										
DATE REQUIRED										
						Sheet 2 of 2				

2-5

4

O.R.C. &
PRINTS

PURCHASE REQUISITION

No. 403686

403686

3. PURCHASING DEPT.

SUGGESTED VENDORS:

DATE February 25, 1965

REQUISITIONED BY Application Engineering	S. O. NO. C-2244	CHARGE ACCOUNT NO. 10.220
APPROVED BY C. McCarthy	TERMS	DELIVER TO Stores
ROUTING (PUR. DEPT. USE ONLY)	G. O. NO. SP65-0014	DATE MATERIAL REQUIRED (FISCAL WEEK)

ITEM NO.	QUANTITY	DESCRIPTION	PART OR PATTERN NO.	PRICE - (PUR. DEPT. USE ONLY)
1	1	Woodward type PG governor with hand speed changer. Gov. operating speed range 875-675 rpm. 29 ft. lb. diff. S.M. located in plant D, S.M. quadrant No. 2 S.M. for 1" Max. stroke. S.M. for push to close operation. Operating S.M. stroke .725. Furnish tie in connections for oil cooler but do not furnish cooler. Gov. drive base No. 360117. Clevis No. 011952. Dust boot. Oil level sight glass in Plan "A". General governor drive and S.M. arrangement per Elliott drawing L-3932. *		
		<i>NO DROP AS PER KEN KRAVNIK 3-5-65</i>		
		<i>PRINT SENT TO REC. DEPT. 4-8-65</i>		
		<i>TWO</i>		
		PLEASE FURNISH ONE CERTIFIED TRANSPARENT ORCERTIFIED PRINTS FOR RECORD - ORIGINAL BY..... <i>9 MAR 65</i> PLEASE FURNISH <i>19</i> COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS AND SPARE PARTS LISTS.		

PURCHASING DEPARTMENT USE ONLY: PRICES SHOWN ARE F.O.B.

FEB 26 1965

D-20

PURCHASE REQUISITION

No. **403685**
403685

PURCHASING DEPT.

TESTED VENDORS:

DATE **February 25, 1965**

LC 58538

REQUISITIONED BY Application Engineering	S. O. NO. C-2244	CHARGE ACCOUNT NO. 10.220
APPROVED BY C. McCarthy	TERMS	DELIVER TO Stores
ROUTING (PUR. DEPT. USE ONLY)	G. O. NO. SP65-0014	DATE MATERIAL REQUIRED (FISCAL WEEK)

ITEM NO.	QUANTITY	DESCRIPTION	PART OR PATTERN NO.	PRICE - (PUR. DEPT. USE ONLY)
1	1	non-packaged Electric Machinery manufacture Benac II, 125 KW, 150 KVA, 1800 RPM, 3 phase, 60 cycle, 480 volt, Class B insulation, 60° C rise over a 40° C ambient, capable of 25% overload for two hours or 10% overload continuous, in accordance with Standard Oil specifications E-2390, CCW Rotation.		
2	1	Separate floor-mounted EM Generator Panel, NEMA 3 construction, containing the following:		
		1. Voltage regulator		
		2. Voltmeter and Ammeter - AC		
		3. Frequency meter		
		4. Elapsed Time meter		
		5. Voltage adjusting rheostat		
		6. 400 amp, 250 amp, trip circuit breaker, Westinghouse.		
		7. 10 amp, 600 volt control relay		
		8. Isolating switch for space heater		
		Prints are to contain no torsional analysis data.		
		PLEASE FURNISH ONE CERTIFIED TRANSPARENCY ON 2... CERTIFIED PRINTS FOR PRINTS - APPROVAL BY.....		
		PLEASE FURNISH 19..... COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS AND SPARE PARTS LISTS.		

RELEASE OF REPT & PRINTS FOR RECORD TAKEN CARE OF BY R. L. STENART. 4/9/65

OK RC Stenard 4/9/65

APPROVED FOR CONSTRUCTION
ELLIOTT COMPANY
A DIVISION OF CARRIER CORPORATION
JEANNETTE, PA.
BY **D. W. CROCKER**
DATE **APR 9 1965**

APPROVED FOR CONSTRUCTION
ELLIOTT COMPANY
A DIVISION OF CARRIER CORPORATION
JEANNETTE, PA.
BY _____
DATE _____

PURCHASING DEPARTMENT USE ONLY: PRICES SHOWN ARE F.O.B.

No. 403684
403684

SUGGESTED VENDORS:

DATE February 25, 1965

REQUISITIONED BY Application Engineering	S. O. NO. C-2244	CHARGE ACCOUNT NO. 10.220
APPROVED BY C. McCarthy	TERMS	DELIVER TO Stores
ROUTING (PUR. DEPT. USE ONLY)	G. O. NO. SF-65-0014	DATE MATERIAL REQUIRED (FISCAL WEEK)

[illegible]

PURCHASING DEPARTMENT USE ONLY: PRICES SHOWN ARE F.O.B.

FEB 26 1968

S.O.

C-2308

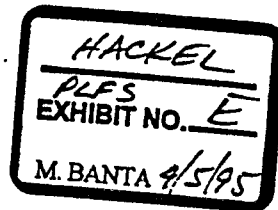
STANDARD OIL CO. OF

Purchaser

CALIF.

CALIF.

State



1

DESIGN
INFO.

ELLIOTT COMPANY
A DIVISION OF CARRIER CORPORATION

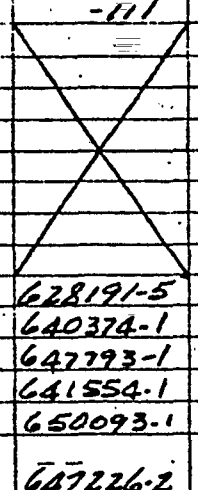
NORMAL MAINTENANCE PARTS LIST

for

Type 2C YR Turbine

G.O. No. SF65-0004-D Serial No. 6-2308 S.O. No. 6-2308 Instruction Book 100

For STANDARD Oil Co. Of Calif. PO. # 32-98-G-1 AT-46-86 Item

Item	Part Number	Catalog Number	Req'd Per Unit		Item	Part Number	Catalog Number	Req'd Per Unit	
Bearing Liner (Upper Half)	523	<u>625781-5</u>	<u>2</u>		Follower	574	646107-1	1	
Bearing Liner (Lower Half)	522	<u>625781-6</u>	<u>2</u>		Pin	677	646771-1	1	
Oil Ring	624	<u>640927-1</u>	<u>4</u>		Connection	654	646637-1	1	
Carbon Ring Assy. (Standard)	512	<u>634159-7</u>	<u>8</u>		Pin	675	646643-2	1	
Carbon Ring Assy. (Huhn)	512	—	—		Retaining Ring	673	P27E16	4	
Valve & Stem Assy. (Governor)	651-2-3	<u>618234</u> <u>-111</u>	<u>1</u>		Pin	672	646643-1	1	
Valve	651		1		Shoulder Bolt	805	—	1	
Stem	652		1		Block	808	—	2	
Pin	653		1		Connection	807	—	1	
Pin	579		1		Weight Assembly	665	<u>633823-9</u>	3	
Sleeve	580		1		Spring (Governor)	667	<u>660379-1</u>	1	
Lockwasher	581		1		Ball Bearing	662	692358-1	1	
Nut	582		1		Bearing Case	663	646686-1	1	
Lockwasher	584		1		Spindle Assembly	700	629379-10	1	
Valve Seat	567	<u>628191-5</u>	1		Seal	681	646704-1	1	
Trip Pin	938	<u>640374-1</u>	1		Spring Seat	666	646692-3	1	
Adjusting Nut	937	<u>647793-1</u>	1		Connection	655	646572-1	1	
Trip Spring	940	<u>641554-1</u>	1		Adjusting Nut	668	646632-1	1	
"U" Lock Staple	942	<u>650093-1</u>	2						
Ball Bearing (Rotor Locating)	623	<u>647226-2</u>	1		Diaphragm	1476	—	1	
Retaining Ring	622	<u>P27638</u>	1		Spring	1484	—	1	
Spring	540	<u>646687-2</u>	1		Adjusting Screw	1485	—	1	
Plunger Assembly	936	<u>647517-4</u>	1		Ball Bearing	1487	—	1	
Knife Edge	934	650293-1	1		Valve Stem	1491	—	1	
Knife Edge	963	692000-1	1		Pin	745	—	1	
Roll Pin	964	691999-1	1		Block	746	—	1	
Valve Stem Packing	573	637387-2	1		Bellows Assembly	1363	—	1	
Valve & Stem Assy. (Double Seated)	916	<u>638268-6</u>	1		Rod End	1371	—	1	
Valve & Stem Assy. (Single Seated)	930	—	1		Ball Bearing	1379	—	2	
Spring	922	645953-1	1		Bearing (Heim)	1382	—	1	
Spring (Resetting)	928	647629-1	1		Oil Pump	—	—	—	
					Oil Pump Coupling	—	—	—	
					Oil Pump & Coupling	—	—	—	
					Pin	1038	—	1	
					Heim Bearing	1046	—	2	
					Pin	1054	—	1	
					Pin	833	—	2	
					Pin	834	—	3	
					Link	1055	—	1	

- Used on Units having Standard Governor, "F" Governor, "O" Governor, "W" Governor, or "PG" Governor.
- Used on Units having Standard Governor, "F" Governor or "P" Governor.
- Used on Units having "O" Governor or "W" Governor, or "F" Governor — Except Variable Ratio Linkage
- Used on Units having "O" Governor or "W" Governor.
- Used on Units having "P" Governor.
- Used on Units having "POC" Governor.
- Used on Units having "O" or "POC" Governors or "W" Governors.
- Used on Units having "PG" Governor.
- Used on Units having Standard Governor, "F" Governor, "O" Governor or "W" Governor.

TURBO SEAL - X414-105
FEL PRO C-5 - X415-113
PLASTIC GASKET - X416-123
PLASTIC GASKET - X416-133
TITE SEAL - X467-116

GLE VALVE TURBINE APPARATUS SPECIFICAT

JI-98-G-1 P. O. NO. JI-4-G-86		PURCHASER Standard Oil Co. of Calif. Western Operations, Inc.		USER Same	
DATE 2-25-65		ADDRESS 225 Bush Street San Francisco, Calif.		ADDRESS Richmond, Calif. Attn: H. M. Evans	
GEN. ORDER NUMBER SF65-0004-D					
TURBINE ROTATION FACING GOVERNOR CLOCKWISE		H.P. 75	TYPE TURBINE CYR	TURB. RPM 1750	STEAM RATE 104
GEAR S.F. 140		TYPE GEAR PSIG	PSIG INLET 361	FT 50	PSIG/IN. HG. ABS 104
DESIGN STEAM CONDITIONS 140 PSIG 361 FT 50		EXHAUST FACING GOV. ☒ L.H. ☐ R.H. ☐ UP ☐ DOWN		GEAR SHAFT OFFSET FACING PINION ☐ L.H. ☐ R.H.	
COUNTER-CLOCKWISE ☒		ELLIOTT CLASS I		DRIVEN MACHINE Cent. Pmp	
YES ☐ NO ☒		SUITABLE 250		GEAR SERIAL SOLD WITH	
STD SPEC		NUMBER HAND VALVES ☒ NONE ☐ ONE ☐ TWO		HAND VALVE SETTINGS	
SPEED RANGE 1490		RMP TO 1840		HP RPM APPROX. RATE	
PUMP PRESSURE		☐ DIRECT ☐ AIR ☐ DELAYED ☐ BUILT IN ☐ SEPARATE		PSIG FT PSIG/IN. HG. ABS	
REGULATOR		MAX. PSIG PSIG DIFF.		HP RPM APPROX. RATE	
SPEED CHANGER		☐ AIR ☐ ELECTRIC TO PSIG SPEED RANGE INCREASE WITH AIR PRESS.		PSIG FT PSIG/IN. HG. ABS	
INSULATING JACKETING		PAINTED STAINLESS STEEL		PURCHASER'S INSPECTION ☒ NONE ☐ SURF ☐ WITNESS ☐ WITNESS	
STEAM STRAINER ☒		PAINT REQMTS. ☒ STD. ☐ SPECIAL		NO LOAD FULL LOAD	
OIL COOLER		SHIPPING PREP. ☒ STD. ☐ EXPORT ☐ EXPORT BOX		UNIT PRICE 2517 CONTRACT PRICE 2517	
WATER TEMP.		OF. ☐ FRESH ☐ SALT ☐ BRACKISH		TYPE PLANT Refinery NET WEIGHT 2050	
BASEPLATE		☐ PLAIN ☐ DRIP RIM ☐ FABRICATED ☐ FLAT STEEL		DRAWINGS	
Coupling Between Turbine & Gear		SPECIAL: MAKE		PRINTS: QUAN. 3 TRANSPARENCY: QUAN. 1	
Mount Purchaser Half Coupling		CUSTOMER'S MATERIAL TAG # (ISSUED BY JNTE.) 1308		APPROVAL ☒ RECORD ☐ JEANNETTE ☒ DISTRICT	
REMOTE TRIP		☐ HYDRAULIC ☐ PNEUMATIC ☐ PSIG TRIP PRESS		QUANT. INSTR. BOOKS ☐ BY ☒ DIST. ☐ JNTE.	
CONDENSING GLAND SEALING		☐ OPEN TYPE ☐ ENERGIZED TRIPPING		FIELD WORK ☒ NONE ☐ SUPT. ONLY ☐ DAYS	
FLANGE STUDS		☐ SOLENOID ☐ CL. I. GP. D. ☐ DE-ENERGIZED TRIPPING		ENGR/CONTRACTOR	
CONSTANT LEVEL OILERS		☐ PIPING ONLY ☐ COMPLETE GAUGES, VALVES ETC.		SALESMAN HPH #315	
PENALTY CONTRACT ☐ YES ☒ NO		PENALTY DATE		PRODUCT ENG. KT.H.	

SPECIAL INSTRUCTIONS

1. Furnish 1/4" NPT on bearing caps
2. Tag TP-595A, Order No. JI-4-G-86
3. Trip speed setting 2100 RPM

D.O. COPIES

SF

DATE REGISTERED	REG. CONTRACT SERVICES BY	REQUESTED SHIPPING DATE	SCHEDULED SHIPPING DATE *	SHOP ORDER/SERIAL NO. *
				C-2308

* NOT TO BE COMPLETED IN FIELD

MAR 22 1965

E-4

ENGINEERING DEPARTMENT

SINGLE STAGE TURBINE AND/OR GEAR DESCRIPTIVE SPECIFICATIONS

DATE 3-26-65	GENERAL ORDER SF65-0004	SHOP ORDER C-2308
INLET CONN. SIZE 3" GOV. VALVE SIZE 3"-DS EXHAUST CONN. L.H. TURB. ROT. L.H. --- (FROM GOV. END) ROTOR FOR 4760 R.P.M. MAX. TRIP TYPE GOV. STD. MECH. - SMALL SPEED CHANGER HAND (---) HAND VALVES - UPPER LOWER INSOLE AND JACKETING STD. STEEL BASEPLATE COLEPLATE COUPLING H.S. COUPLING L.S. GEAR OFFSET L.H. - R.H. (FROM GOV. END) GEAR RATIO	GEAR NAME PLATE DATA GEAR SERIAL NO. RATING SIZE SERVICE FACTOR L.S. INSTR. BOOK NO. 208 SPECIAL	TURBINE NAME PLATE DATA TURBINE SERIAL NO. C-2308 TYPE OCYR HP 75 R.P.M. 1750 INLET 140 PSIG TEMP. 361 DEG. F. EXH. 50 PSIG EXH. INSOLE TRIP SETTING 2100 R.P.M. CLASS TURB. I INSTR. BOOK NO. 100

TURB. BRGS. R.O. ---	PIPING MAT'L ---	OIL SYSTEM ---	OIL RESERVOIR ---
OIL PUMP SIZE ---	GAL/100 R.P.M. DRIVEN FROM ---		
AUX. OIL PUMP ---	OIL COOLER ---	OIL FILTER ---	

PAINTING REQUIREMENTS: STD.
 SHIPPING PREPARATION: STD. CLASS A. SP-10. GR. 1. BLUSHING SP-101
 SPECIAL CONSTRUCTION:

1. FURNISH $\frac{1}{4}$ " - 18 NPT "OIL MAKE-UP" CONNECTIONS ON R.H. SIDE OF STEAM END & EXHAUST END BRG CASE CAPS (SAME AS B-2442)

TURBINE NAME PLATE DATA (MAX. DESIGN CONDITIONS)		
INLET	250	PSIG
TEMP.	600	DEG. F.
EXH.	60	PSIG
FIRST CRITICAL	8510	R.P.M.

DRIVEN MACHINE (FURNISHED - NOT FURNISHED)

PUMP

AUXILIARY APPARATUS:

1. TRICO OILERS - P.6591A012

OUTLINE 639671

REVISIONS	
BY	DATE

MAR 22 1965

E-5

3

B/M's

1. 29 1965

A Divis Carrier Corporation

MANUFACTURE BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO. <i>C2308</i>		PART NAME TURBINE		TYPE <i>2CYR</i>		F.I.C.	APPARATUS TURBINE			DRAWING NO. <i>Z-638671</i>				
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	MAKE FROM Matl. Spec.			DESCRIPTION	U/ M	R.I.C.	QUAN.	✓
<i>1</i>	<i>2CYR TURBINE</i>	<i>C2308-A-T</i>	<i>B/M</i>	<i>1</i>			<i>1</i>			<i>B/M</i>				
				<i>2</i>										
	<i>[REDACTED]</i>	<i>[REDACTED]</i>		<i>3</i>		<i>[REDACTED]</i>								
	<i>[REDACTED]</i>	<i>[REDACTED]</i>		<i>4</i>		<i>[REDACTED]</i>								
	<i>[REDACTED]</i>	<i>[REDACTED]</i>	<i>[REDACTED]</i>	<i>5</i>		<i>[REDACTED]</i>								
				<i>6</i>										
				<i>7</i>										
				<i>8</i>										
				<i>9</i>										
		ORDER COMPLETE DATE MAR 26 1965		<i>10</i>										
				<i>11</i>										
				<i>12</i>										
				<i>13</i>										
				<i>14</i>										
				<i>15</i>										
				<i>16</i>										
<i>1</i>	SLUSHING AND SHIPPING PREP.	STD. CLASS <i>A</i> GR. 2 SLUSHING		SP-109 SP-501										
				<i>17</i>										
				<i>18</i>										
ORDER NO. <i>C2308</i>		PART NO. <i>C2308-A-T</i>		DISTRIBUTION						Prepared By <i>E.N.</i> Date <i>3-25-65</i>				
QUANTITY										<i>3-29-65</i>				
DATE REQUIRED														

28 1965

A Division

Carrier Corporation

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO. <i>C2308-A-T</i>		PART NAME TURBINE		TYPE 2 CYR		F.I.C.	APPARATUS TURBINE		DRAWING NO. Z-638671		
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	Matl. Spec.	DESCRIPTION	R.I.C.	QUAN.	
1	2 CYR TURBINE	C2308-30	B/M	1				B/M			
1	NAMEPLATE (TURBINE)	P6200A 304	STAMP AS FOLLOWS	2		H					
	TURBINE NO. C2308		TYPE 2 CYR	3							
	RATED CONDITIONS		MAX. DESIGN CONDITIONS	4							
	H.P. 75			5							
	SPEED 1750	R.P.M.	SPEED 4760	6							
	TRIP SETTING 2100	R.P.M.		7							
	INLET PRESS. 140	PSIG.	INLET PRESS. 250 PSIG.	8							
	INLET TEMP. 361	°F.	INLET TEMP 600 °F.	9							
	EXH. PRESS 50	PSIG.	EXH PRESS. 60 PSIG.	10							
	EXH. PRESS —	IN. HG. ABS.	FIRST	11							
	INSTRUCTION BOOK 100		CRITICAL 8510 R.P.M.	12							
4	SELF TAPPING SCREW (FOR ABOVE)	P22D23	#6-32 x 3/8"	13		HS		STNLS STL.			
				14							
1	MOUNTING COUPLING HALF			15				MOUNT PURCHASERS COUPLING HALF R.M.A. # 1308 ON TURBINE SHAFT.			
1	KEY (FOR ABOVE)	641388-2	1 1/16" x 5/8" x 3 1/32" Lg.	16		H		55			
1	TAG (FOR SHIPMENT)			17				MARK TAG: TP-595A, ORDER NO. JI-4-G-86 AND ATTACH SECURELY TO TURBINE BEFORE SHIPMENT.			
				18							
1	ASSEMBLY			19							
1	TEST		AS PER SP-30	20							
1	INSPECTION			21							
1	PAINTING		AS PER PS-402	22							
1	SLUSHING AND SHIPPING PREP.	579 CLASS A GR. 2 SLUSHING	SP-109 SP-501	23							
ORDER NO. C2308		PART NO. C2308-A-T		DISTRIBUTION						Prepared By: E.N. <i>K</i>	
QUANTITY										Date 3-25-65 3-29-65	
DATE REQUIRED				FOR STANDARD OIL CO. OF CALIF.							

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO.		PART NAME		F.I.C.		APPARATUS		DRAWING NO.	
C2308-30		2 CYR TURBINE				TURBINE		2-638671	
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	MAKE FROM		
							Matl. Spec.	DESCRIPTION	R.I.C. QUAN. ✓
1	CASING ASSEMBLY	601462-41	B/M	1		STD B/m			
				2					
				3					
				4					
2	PACKING CASE ASSEMBLY	625384-4	SEE NOTE B/m	5		MS			
NOTE: SEE PIPING DIAGRAM DWG. FOR PARTS TO BE ASSEMBLED ON PKG. CASES BEFORE BOLTING PKG. CASES TO CASING									
4	CAP SCREW (PKG. CASES TO CASING)	P23X226	5/8"-11 x 1" KNUR. SOC. HD.	7		H	-162A-2		
12	CAP SCREW (PKG. CASES TO CASING)	P23X227	5/8"-11 x 1-1/4" KNUR. SOC. HD.	8		H	-162A-2		
1	PIPING DIAGRAM (LEAKAGE)	612622-91	B/M	9		STD B/m			
				10					
1	SENTINEL VALVE	P66J12	3/4" SET ATSS	11		MS			
				12					
2	PLUG (FOR HAND VALVE OPENING)	646659-1		13		MS			
2	GASKET (FOR ABOVE)	646126-7		14		HS			
2	BEARING LINER (UPPER HALF)	625781-5		15		MS			
2	BEARING LINER (LOWER HALF)	625781-6		16		MS			
				17					
				18					
ORDER NO.		PART NO.		DISTRIBUTION				Prepared By E.N.	
C2308		C2308-30						Date 3-25-65 3-29-65	
QUANTITY									
DATE REQUIRED									

MAR 29 1965

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO.		PART NAME		F.I.C.		APPARATUS		DRAWING NO.			
C2308-30		2 CYR TURBINE				TURBINE		2-638671			
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	Matl. Spec.	DESCRIPTION	R.I.C.	QUAN.	✓
1	BEARING CASE (STEAM END)	617531-613	B/M	19		STD B/m					
1	BALL BEARING (THRUST)	647226-2		20		MS					
1	LATCH ASSEMBLY	624944-11	B/M	21		MS					
1	STM. END BRG. CASE REMAINING	638707		22				DRILL & TAP BEARING CASE AS SHOWN ON DWG. 2-638707	AS		
				23							
1	END SUPPORT	646559-6		24		M					
2	MACH BOLT (BRG. CASE TO SUPPORT)	P10C263	5/8"-11 x 2" HEX. HD. S.F.	25		H	-162A-2				
2	LOCKWASHER (FOR ABOVE)	P25A49	5/8" (203 x 156) KANTLINK	26		H	STL.				
2	NUT (FOR ABOVE)	P11A16	5/8"-11 HEX	27		HS	STL.				
				28							
4	SPACER (BRG. CASE TO CASING)	649581-2		29		HS		649581-4			
4	CAP SCREW (BRG. CASE TO CASING)	P23X289	7/8"-9 x 1-3/4 KNUR. SOC. HD.	30		H	-162A-2				
2	PIN (BRG. CASE TO CASING)	P36L 228	1/2" X 1"	31		H	-162A-2				
				32							
				33							
				34							
				35							
				36							

ORDER NO.	PART NO.	DISTRIBUTION		Prepared By	E. N.	LK
C2308	C2308-30			Date	3-25-65	3-29-65
QUANTITY						
DATE REQUIRED						

1965 APR 20 1965

MANUFACTURING BILL OF MATERIAL

A Division of Miller Corporation

APPARATUS ORDER - ASSEMBLY AND UNIT - DETAIL - PARTIAL - STANDARD

PART NO.		PART NAME				F.I.C.	APPARATUS		DRAWING NO.			
C 2308-30		2 CYR TURBINE					TURBINE		Z-638671			
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/M	F.I.C.	Mat. Spec.	DESCRIPTION	R.I.C.	QUAN.	✓	
1	NOZZLE RING	C2308-100	SEE NOTE	37				MAKE FROM 624761-1	MS			
NOTE: REAM THE FOLLOWING NOZZLES IN THE ABOVE NOZZLE RING SEE DWG. 633669 FOR LOCATIONS.				38								
	DRAWING NO.			39								
2	646698	REGULAR NOZZLE 75/750-20° L.H.	LOCATIONS # 1-2	40								
1	633893-14	REGULAR NOZZLE 75/750-20° L.H.	LOCATION # 3	41								
		No 1 ST OULP. NOZZLES		42								
		No 2 ND OULP. NOZZLES		43								
				44								
				45								
18	CAP SCREW (FOR NOZZLE RING)	P23X226	5/8"-11 x 1" KNUR. SOC. HD.	46		HS		162A-2				
22	CAP SCREW (FOR NOZZLE RING)	P23X229	5/8"-11 x 1-3/4" KNUR. SOC. HD.	47		H		162A-2				
40	LOCKWASHER (FOR ABOVE)	P25R26	5/8" SHAKEPROOF	48		HS		CAD. PL. STL.				
1	BUCKET HOLDER ASSEMBLY	624783-35	B/M	49		M						
				50								
	LOCATE BUCKET HOLDER AS PER ARRGT. # 2 AS SHOWN ON DWG. 624783			51								
2	CAP SCREW (FOR BUCKET HOLDER)	P23X202	1/2"-13 x 2-1/2" KNUR. SOC. HD.	52		H		162A-2				
2	LOCKWASHER (FOR ABOVE)	P25R24	1/2" SHAKEPROOF	53		HS		CAD. PL. STL.				
2	SPACER (FOR BUCKET HOLDER)	645997-1		54		HS						
ORDER NO.		PART NO.		DISTRIBUTION				Prepared By F.N. LR				
C 2308		C2308-30						Date 3-25-65 3-29-65				
QUANTITY								REV 4-20-65 LK				
DATE REQUIRED												
								Sheet 3 of 5				

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO. <i>C2308-30</i>		PART NAME <i>2 CYR TURBINE</i>				F.I.C.	APPARATUS <i>TURBINE</i>			DRAWING NO. <i>Z-638671</i>			
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	MAKE FROM			U/ M	R.I.C.	QUAN.	✓
							Matl. Spec.	DESCRIPTION					
				55									
1	TRIP PIN SPRING	<i>641554-1</i>		56		<i>HS</i>							
1	TRIP PIN	<i>640374-1</i>		57		<i>HS</i>							
1	TRIP PIN ADJ. NUT	<i>647793-1</i>		58		<i>HS</i>							
2	TRIP PIN LOCKWIRE	<i>650093-1</i>		59		<i>HS</i>							
1	TRIP PIN WASHER	<i>E-62901-1</i>		60		<i>HS</i>							
				61									
				62									
1	ROTOR ASSEMBLY	<i>613955-70</i>	<i>L.H. ROT. B/M</i>	63		<i>STD B/m</i>							
8	PACKING RING ASSEMBLY	<i>634159-7</i>	<i>B/M</i>	64		<i>MS</i>							
4	OIL RING	<i>640927-1</i>		65		<i>HS</i>							
1	BEARING PEDESTAL (EXH. END)	<i>601987-G1</i>	<i>B/M</i>	66		<i>STD B/m</i>							
4	SPACER (SPACER TO CASING)	<i>649581-2</i>		67		<i>HS</i>		<i>649581-4</i>					
2	STUD (PED. TO CASING)	<i>646006-6</i>		68		<i>H</i>							
2	TAPER PIN (FOR ABOVE STUD)	<i>P36H195</i>	<i>#5 X 2"</i>	69		<i>HS</i>	<i>STL</i>						
4	CAP SCREW (PED. TO CASING)	<i>P23X289</i>	<i>7/8"-9 x 1-3/4" KNUR. SOC. HD.</i>	70		<i>H</i>	<i>-162A-2</i>						
2	PIN (PED. TO CASING)	<i>P36L228</i>	<i>1/2" x 1"</i>	71		<i>H</i>	<i>-162A-2</i>						
1	RE-MACHINING OF BEARING PEDESTAL	<i>638708</i>		72				<i>DRILL & TAP BEARING PEDESTAL AS SHOWN ON DWG. Z-638708</i>					

ORDER NO. <i>C2308</i>	PART NO. <i>C2308-30</i>	DISTRIBUTION	Prepared By <i>E.N.</i>
QUANTITY			Date <i>3-25-65</i> <i>3-29-65</i>

MANUFACTURING BILL OF MATERIAL
APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO.		PART NAME		F.I.C.		APPARATUS		DRAWING NO.			
C 2308-30		2 CYR TURBINE				TURBINE		2.638671			
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/M	F.I.C.	Matl. Spec.	DESCRIPTION	R.I.C.	QUAN.	✓
1	STEAM CHEST ASSEMBLY	603156-318	B/M	73		STD B/m					
1	VALVE AND STEM ASSEMBLY	618234-111	3" ASSEM. IN STM. CHEST-- B/M	74		MS					
1	VALVE SEAT	628191-5	3" ASSEM. IN STM. CHEST-- B/M	75		MS					
2	PIN (STM. CHEST TO CASING)	P36L226	1/2" x 3/4"	76		H	-162A-2				
10	NUT (STM. CHEST TO CASING)	P11A17	3/4"-10 HEX.	77		HS	STL.				
				78							
				79							
				80							
1	GOVERNOR	629381-69	B/M	81		STD B/m					
3	GOVERNOR WEIGHT	633823-9	B/m	82		MS					
				83							
1	GOVERNOR LEVERS	670328-613	B/M	84		STD B/m					
2	TRICO OILER	P6591A012		85		H					
1	PIPE NIPPLE (FOR STM. END BRG. CASE)	P41Y15	1/4" SCH. 80 x 2 1/2" LG.	86		H	171	TO BE USED ON BRG. CASE AND PED. IN PLACE OF GITS #809 OIL CUP.			
1	PIPE NIPPLE (FOR EXH. END PED.)	P41X11	1/4" SCH. 80 x 1 1/2" LG.	87		H	171				
				88							
				89							
1	ASSEMBLY			90							

ORDER NO.	PART NO.	DISTRIBUTION	Prepared By
C 2308	C 2308-30		E. N. LK
QUANTITY			Date
			3-25-65 3-29-65
DATE REQUIRED			

[illegible]

Elliott
DIVISION OF
CARRIER CORPORATION
JEANNETTE, PA.

WHEN REMITTING
REFER TO.

PURCHASER'S ORDER NUMBER AND DATE WR HBM-26526-R 12047		REQUISITION NO./MARKS		S.G. NO.		DATE MO DAY		NUMBER PFS YR NO			
				C-2067-100		31208		SF682043			
STANDARD OIL CO OF CALIF. WESTERN OPERATIONS INC. DISBURSEMENTS OFFICE 355 MARKET STREET RM 909 SAN FRANCISCO CALIFORNIA 94120 STANDARD OIL CO OF CALIF. WESTERN OPERATIONS INC. HBM-26526-R RICHMOND REFINERY PURCHASE AND STORES RICHMOND CALIFORNIA 94802				QUOTE COOL		INVOICE DATE					
				1. D.O. 4. INVT		1. RES. OF		2. UNQUOTE			
				SHIPPED FROM		DATE SHIPPED					
				HOW SHIPPED							
				ESTIMATED SHIPPING DATE		7/2/68		CODE			
				TRANSPORTATION CHARGES							
				1. SHIPPING POINT/F.O.B		3. COLLECT		5. CHARGE			
				2. DEST. F.O.B		4. PREPAID		6. NO CHARGE			

TAX USE		REG. SHIP		DEST.		REQ. METHOD OF SHIP.		ADDITIONAL MARKS		TERMS: NET 30 DAYS UNLESS OTHERWISE INDICATED BELOW		S/M INIT.		CR. APPR.	
DIST. CODE		T N C		MO DAY		CODE									
0500X		S121804		NORWALK		RINGSBY EXPRESS						136DPC			
ITEM	QTY.	DESCRIPTION/PART NO.				CATALOG NO.				F.I.C.		UNIT PRICE		AMOUNT	
1	1	CHROME PLATED STEEL NOZZLE RING PT 601				C-2067-100				SUL		HME FROM		625148-1 (51)	
	3	REG. NOZZLE				646538									
		1750/750-20° RH LOCATION 2-3-4													
	1	REG. NOZZLE				633842-14									
		1690/750-20° RH LOCATION 45													
		NO OULD NOZZLE													
		SEE REAM DIAG. 633977 FOR LOCATION													

N1 FOR 2BYRM SN C2067-1
N2 DELIVERING CARRIER COLLECT FROM STND OIL CO
OF CALIF WESTERN OPERATIONS INC TRAFFIC AND
DISTRIBUTION DEPT BOX 7945 SAN FRANCISCO CALIF 94120

APP CODE		ORDER CODE		CARD CODE		PRODUCT CODE		PRODUCT CODE		PRODUCT CODE		MONTH CREDIT		SERVICE PARTS		CUST REQUEST		COMMISSIONS.	
SALES ALLOCATION														INIT		DATE		AGENT	
DO %		S/M %																	
SF100448100														DH		11/17/65			
																		AMOUNT	

[illegible]

57
10-20

5

PURCHASER'S ORDER NUMBER AND DATE										REQUISITION NO./MARKS										S.O. NO.										GENERAL ORDER																																																									
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QUOTE CODE										INVOICE DATE										1. D.O. 4 ISRV 2. REG. OFF. 3. UNQUOTE																																																																			
SHIPPED FROM										DATE SHIPPED										HOW SHIPPED																																																																			
ESTIMATED SHIPPING DATE										CODE										11-10-67																																																																			
TRANSPORTATION CHARGES										1. SHIPPING POINT/F.O.B. 2. DEST./F.O.B.										3. COLLECT 4. PREPAID										5. CHARGE NO CHARGE																																																									
TAX USE										REQ. SHIP										DEST.										REG. METHOD OF SHIP.										ADDITIONAL MARKS																																															
DIST. CODE										Y N C										MO DAY										CODE										TERMS: NET 30 DAYS UNLESS OTHERWISE INDICATED BELOW										S/M INIT.										CR. APPR.																											
0500X										SRUSH										4										UNITED AIR										1450PC										1450PC																																					

[illegible]

N1 REQUESTED MONDAY IF POSSIBLE WITHOUT EXTRA CHARGE

APP CODE		ORDER CODE		CARD CODE																
SALES ALLOCATION				PRODUCT CODE		PRODUCT CODE		PRODUCT CODE		MONTH CREDIT	SERVICE PARTS		CUST REQUEST			D O	COMMISSIONS:			
D O	%	S/M	%						INIT.		DATE	I	O	P	B			L	L	AGENT
SF	100	448	100																	
										RWR										
0																				

F-4

[illegible]

F5

GENERAL ORDER

08235 --- H-70323-GS

C-2067C30826 SF652264
6035

6	'E	CODL	INVOICE DATE
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STANDARD OIL CO., OF CALIF.
WESTERN OPERATIONS, INC. H-70323-GS
ATTN: R.D. MURRAY
RICHMOND, CALIFORNIA

SHIPPED FROM	DATE SHIPPED

NOV. SHIPPED

SCHEDULED SHIPPING DATE	
-------------------------	--

TRANSPORTATION CHARGES

1 SHIP POINT
1 2 b
2 DESTION

3 COLLECT
4 PREPAID

3. CHANGE
6. NO
CHARGE

TAX		USE		REQ SMT		DEST CODE	REQ METHOD OF SHIP.
DIST.	CONT	Y	N	C	MS		

ADDITIONAL MARKS

TERMS. NET 30 DAYS UNLESS
OTHERWISE INDICATED BELOW

S/M INIT.	CR APPR
--------------	------------

4 Q500X SASAP04

P P

146DP C

[illegible]

N1 REQUIRED AT DESTINATION ITEM #6 ON
9-3-65, BALANCE ON 9-17-65

SF 100 448 100

* PRODUCT CODE

PREVIOUS EDITION

Mr. Nathan
C. F. D. D.

SERVICE PARTS

CUS*
REQ.*

COMMISSIONS

1. EN

DO
COPIES

AMOUN

F-6

VALVE TURBINE APPARATUS SPECIFICATION

P. O. NO. JI-7-G-537		PURCHASER Standard Oil Co. of California		USER Same	
DATE 11-30-64		ADDRESS 225 Bush Street San Francisco, Calif., 94104		ADDRESS Richmond Refinery Richmond, California	
GEN. ORDER NUMBER SF65-0004A					

TURBINE ROTATION FACING GOVERNOR	H.P. 375	TYPE TURBINE 2BYRH	TURB. RPM 4450	STEAM RATE 64.5	EXHAUST FACING GOV. ☐ L.H. ☒ R.H. ☐ UP ☐ DOWN
CLOCKWISE ☒	GEAR S.F. 1.5	TYPE GEAR C-3	GEAR RPM 1780	MINIMUM GEAR RPM 1780	GEAR SHAFT OFFSET FACING PINION ☒ L.H. ☐ R.H.
COUNTER-CLOCKWISE	DESIGN STEAM CONDITIONS 440	PSIG D&S	FTT 160	PSIG/IN. 600	DRIVEN MACHINE C.P.
CLOCKWISE	ELLIOTT CLASS III	SUITABLE 675	PSIG INLET 750	FTT 200	PSIG EXHAUST
YES	NO	NUMBER HAND VALVES ☒ NONE ☐ ONE ☐ TWO			HAND VALVE SETTINGS
		SPEED RANGE 4660 RPM TO 3750 RPM			HP RPM APPROX. RATE
		☐ DIRECT ☐ AIR DELAYED ☐ BUILT IN ☐ SEPARATE			PSIG FTT PSIG/IN. HG. ABS
		MAX. PSIG PSIG DIFF. ☐ AIR ELECTRIC TO PSIG SPEED RANGE INCREASE WITH INCREASING AIR PRESS.			HP RPM APPROX. RATE
		☒ PAINTED STAINLESS STEEL			PSIG FTT PSIG/IN. HG. ABS
		STEAM STRAINER ☒			PURCHASER'S INSPECTION ☐ NONE ☒ SURF ☒ NO LOAD WITNESS ☐ FULL LOA WITNESS
		OIL COOLER ☒ Single tubular			PAINT REQMTS. ☒ STD. ☐ SPECIAL
		WATER TEMP. 85 OF. ☒ FRESH ☐ SALT ☐ BRACKISH			SHIPPING PREP. ☒ STD. ☐ EXPORT ☐ EXPORT BOX
		BASEPLATE ☐ PLAIN ☐ DRIP RIM ☐ FABRICATED ☐ FLAT STEEL			UNIT PRICE 10,226 CONTRACT PRICE 22,758
		Coupling Between Turbine & Gear ☒ SPECIAL: MAKE Fast only			TYPE PLANT Ref NET WEIGHT 4350
		Mount Purchaser Half Coupling			CUSTOMER'S MATERIAL TAG # (ISSUED BY JNTE.) 1290 1289
		REMOTE TRIP ☒ HYDRAULIC ☐ PNEUMATIC ☐ OPEN TYPE ☐ ENERGIZED TRIPPING			PRINTS: QUAN. 5 TRANSPARENCY: QUAN. 1
		CONDENSING GLAND SEALING ☐ SOLENOID ☐ CL. I. GP. D. ☐ DE-ENERGIZED TRIPPING			☐ APPROVAL ☒ RECORD ☒ JEANNETTE ☒ DISTRICT
		FLANGE STUDS ☐ PIPING ONLY ☐ COMPLETE GAUGES, VALVES ETC.			QUANT. INSTR. BOOKS 8 BY ☒ DIST. ☐ JNTE.
		CONSTANT LEVEL OILERS ☐ INLET ☐ EXHAUST			FIELD WORK ☒ NONE ☐ SUPT. ONLY ☐ DAYS
PENALTY CONTRACT ☐ YES ☒ NO				ENGR/CONTRACTOR Bechtel Corp.	
				SALESMAN ARS #466	
				PRODUCT ENG. WES	

SPECIAL INSTRUCTIONS

1. Mark: P.O. JI-7-G-537 Turbine TP-737 & TP-737A
Two (2) duplicate units required
2. Furnish 1/4" IPS oil make-up connection in each bearing cap in addition to oil ring inspection plugs
3. Trip speed set at 5340 RPM, maximum continuous speed 5000 RPM
4. 4" steam inlet, no load commercial test to be witnessed at Elliott time specified. We are to notify Standard Oil 10 days in advance.
5. Turbine to be capable of 375 HP with 440 psig - 600°F steam

Two Units

DATE REGISTERED 12-2-64	REG. CONTRACT SERVICES BY 12-7-64	REQUESTED SHIPPING DATE 3-20-65	SCHEDULED SHIPPING DATE * (with 4-2-65)	SHOP ORDER/SERIAL NO. * C 2067
-----------------------------------	---	---	---	--

* NOT TO BE COMPLETED IN FIELD

valve & steam Assy - 6182311-111
valve seat - 628192-4
nozzles - 3 - 750/750
1 - 600/750

DEC 10 1964

F-7

ENGINEERING DEPARTMENT

SINGLE STAGE TURBINE AND/OR GEAR DESCRIPTIVE SPECIFICATIONS

DATE 9 DEC 64	GENERAL ORDER SF65-0004A	SHOP ORDER C 2067-1-2
INLET CONN. SIZE 4 GOV. VALVE SIZE 3" DS EXHAUST CONN. STD. R.H. TURB. ROT. STD. R.H. (FROM GOV. END) ROTOR FOR 5916 R.P.M. MAX. TRIP TYPE GOV. STD SMALL SPEED CHANGER HAND (HAND/DRIVEN/OTTER LOWER) INSUL. AND JACKETING STD. STD. COUPLING H.S. FAST 2 1/2" GEAR OFFSET L.H. STD. (FROM GOV. END) GEAR RATIO 2.52	GEAR NAME PLATE DATA GEAR SERIAL NO. C20676-1-2 RATING 375 HP SIZE C-3 SERVICE FACTOR 1.5 H.S. 4450 R.P.M. L.S. 1780 R.P.M. INSTR. BOOK NO. 200	TURBINE NAME PLATE DATA TURBINE SERIAL NO. C2067-1-2 TYPE 2BYRH HP 375 R.P.M. 4450 INLET 440 PSIG TEMP. 457 DEG. F EXH. 160 PSIG TRIP SETTING 5340 R.P.M. CLASS TURB. III INSTR. BOOK NO. 100

OIL SYSTEM

TURB. BRGS. **STD.** F.F. PIPING MAT'L. THIN WALL **STL. TUBING** OIL RESERVOIR **GEAR CASE -14.8**

OIL PUMP SIZE **.535** GAL. 100 R.P.M. DRIVEN FROM **GEAR**

OIL COOLER **BASCO 65024** OIL FILTER **CUNO EG**

PAINTING REQUIREMENTS: STD.
 SHIPPING PREPARATION: STD., CLASS A, SP-109, GR. 2, SLUSHING SP-301

SPECIAL CONSTRUCTION:

FURNISH CARBON RINGS **625389-29**
 FURNISH BRACKET TYPE COUPLING GUARD
 BETWEEN TURBINE AND GEAR.

TURBINE NAME PLATE DATA
(MAX. DESIGN CONDITIONS)

INLET **675** PSIG
 TEMP. **750** DEG. F
 EXH. **200** PSIG
 FIRST CRITICAL **7000** R.P.M.

OUTLINE

DRIVEN MACHINE (NOT FURNISHED)

CP

AUXILIARY APPARATUS:
BASCO OIL COOLER - 401938
FAST COUPLING - 401939

REVISIONS	
BY	DATE
△ CMC	11 DEC 64
△ CMC	18 DEC 64

F-8

3

B/M's

EM O.	NAME OF PART	F.I.C P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.P.O. P.B.M. A.M.A.	QUAN
1	2 BYRH TURBINE	B/M	C2067 -50				B/M		2
4	NAME PLATE (TURBINE)	H	P620A304			STNLS. STL.	PURCHASED STAMP AS FOLLOWS:		2
3			TURBINE NO. C2067-1 C2067-2			TYPE 2 BYRH			
4			HP. 375 SPEED 4750		R.P.M.	MAX. DESIGN CONDITIONS: SPEED 5916	R.P.M.		
5			TRIP SETTING 5370 INLET PRESS. 440		R.P.M. PSIG	INLET PRESS. 675	PSIG		
6			INLET TEMP. 757° EXH. PRESS. 160		F. PSIG	INLET TEMP. 750° EXH. PRESS. 200	F. PSIG		
7			EXH. PRESS. — IN. HG. ABS. INSTRUCTION BOOK NO. 100			FIRST CRITICAL 7000	R.P.M.		
8									
9	SELF TAPPING SCREWS (FOR ABOVE)	HS	P22D23			STNLS STL.	#6-32 x 3/8" LG		8
10	NAME PLATE (GEAR)	H	P620A301			STNLS. STL.	PURCHASED. STAMP AS FOLLOWS: :		2
11			GEAR SERIAL NO. C2067-G1 RATING 375		HP	C2067 G2 SERVICE FACTOR 1.5			
12			HS 4750 R.P.M. SIZE C-3			L.S. 1780 R.P.M. INSTRUCTION BOOK NO. 200			
13									
14	SELF TAPPING SCREWS (FOR ABOVE)	HS	P22D23			STNLS. STL.	#6-32 x 3/8" LG		8
15	NAME PLATE	H	875678 -1				PURCHASED		2
16	SELF TAPPING SCREWS (FOR ABOVE)	HS	P22D23			STNLS STL.	#6-32 x 3/8" LG		8
17									
18	C-3 GEAR	B/M	C2067 C-3				B/M		2
19									
20									
21									
22									
23									
24									
25									

CATALOG NO. C2067	TWO TYPE 2 BYRH TURBINE #C2067-1	ASSEMBLY BILL OF MATERIAL
OUTLINE N- C2067	#C2067-2 #C-3 GEAR #C2067-G1 #C2067-G2	
FOR: STANDARD OIL CO. OF CALIFORNIA		
RECORD NO. SF65-0009A		

ITEM NO.	NAME OF PART	F.I.C. P.O. P.B.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.-P.O. P.B.M. A.M.A.	QUAN.
27	INSULATION AND LAGGING (STN. CH.)	STD. B/M	625271 - G4				B/M		2
28	NIPPLE (FOR VALVE STN. LEAKOFF)	H	P41493			171	1/2" (LONG) SCA 80 X 9 1/2" ASSEM. IN STEAM CHEST COVER TO EXTEND THRU LAGGING		2
29									
30	INSULATION AND LAGGING (TURB.)	STD. B/M	613519 - G1				B/M		2
31									
32	OIL COOLER	REQ. NO. 401938					PURCHASED - BASCO		2
33	OIL FILTER	MS	P35163010				PURCHASED CUMMINS TYPE "EG"		2
34	OIL PIPING	B/M	619159 - GR.1				B/M		2
35									
36	COUPLING (H.S.)	REQ. NO. 401939					PURCHASED - FAST #2 1/2		2
37	KEY (FOR DRIVING HALF COUPLING)	H	641388 - 2			55	7/16" X 5/8" X 3 1/32" LG		2
38	KEY (FOR DRIVEN HALF COUPLING)	H	641388 - 10			55	3/8" X 1/2" X 2 7/16" LG		2
	(H.S.) COUPLING GUARD	B/M	635687 - 4				B/M		2
40	WASHERS (FOR ABOVE)	H	P15 F23			STL.	5/8"		4
41	MOUNTING COUPLING HALF					MOUNT PURCHASERS R.M.A. #1289 & 1290	COUPLING HALF ON GEAR SHAFT.		2
42	KEYS (FOR ABOVE)	H	641388 - 51			55	1/2" X 3/4" X 3 7/32" LG		2
43									
44									
45	ASSEMBLY								2
46	TEST					(NOTIFY ORDER DEPT TWO WEEKS IN ADVANCE OF TEST SO THEY CAN NOTIFY STANDARD OIL.)	AS PER SP-30 NO LOAD WITNESS		2
47	INSPECTION								2
48	PAINTING						AS PER PS-402		2
49	SLUSHING AND SHIPPING PREP.						STD. CLASS A SP-109 GR. 2 SLUSHING		2
50							SP-501		

CATALOG NO.	C2067	TWO TYPE 2 BYRN TURBINE ^A C2067-1	ASSEMBLY BILL OF MATERIAL
IE		£ C2067-2 £ C-3 GEAR ^A B2067-G1 £ C2067G2	
I.O. NO.	C2067	FOR: STANDARD OIL CO. OF CALIFORNIA	
RECORD NO.	5F65-0007A		

ITEM NO.	NAME OF PART	F.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C. P.O. P.S.M. A.M.A.	QUAN.
	Casing Assem.	STD. B/M	613474 -20				B/M		1
3	Packing Case Assem.	MS	613479 -9				See Note B/M		2
	Note:—See Piping Diagram Dwg. for Parts to be Assembled On Pkg. Cases before Bolting Pkg. cases to casing.								
5	Cap Screw (Pkg. Cases to Casing)	HS	P23T228			-162A-2	5/8"-11 x 1-1/2" Lg. Knurled Socket Hd.		20
7	Piping Diagram (Leakage)	STD. B/M	625988 -52				B/M		1
6	STM. END BRG. CASE REMACHINING		638707			DRILL & TAP BEARING CASE AS SHOWN ON DWG. 2-638707			1
7	Sentinel Valve	MS	P67F11				3/4" Set at 275# Purchased		1
0									
1	Plug (For Hand Valve Opening)	MS	646659 -1						2
2	Gasket (For. Above)	HS	646126 -7				Purchased		2
3	Bearing Liner (Upper Half)	MS	625781 -5				Purchased		2
	Bearing Liner (Lower Half)	MS	625781 -6				Purchased		2
5	ALL BEARING (THRUST)	MS	647226 -2						
6	Bearing Case (Steam End)	STD. B/M	617531 -518				B/M		1
7	LATCH ASSEM.	MS	624984 -11						
8	End Support	M	646559 -6						1
9	Mach. Bolt (Brg. Case to Support)	H	P10C263			-162A-2	5/8"-11 x 2" Long Hex. Hd. S.F.		2
0	Lockwasher (For Above)	H	P25A49			Steel	5/8" (.203" x .156") "Kantlink"		2
1	Nuts (For Above)	HS	P11A16			Steel	5/8"-11 Hex. S.F.		2
2	Spacer (Brg. Case to Casing)	HS	649581 -2			Steel	Make From Purchased Washer 649581-4		4
3	Cap Screw (Brg. Case to Casing)	H	P23T289			-162A-2	7/8"-9 x 1-3/4" Long Knurled Socket Hd.		4
4	Pin (Brg. Case to Casing)	H	P36L228						2
5	STM. END BRG. CASE REMACHINING		638707			DRILL & TAP BEARING CASE AS SHOWN ON DWG. 2-638707			1

CATALOG NO.

C2067-50

Type

2 BYRH

Turbine

LINE

I.O. NO.

C2067

For:

STANDARD OIL CO. OF CALIFORNIA

RECORD NO.

5F65-0007A

UNIT
BILL OF
MATERIAL

PREP. BY E.M. DATE 12-12-64

JAN 24 1965

3 PAGES

PAGE NO. 1

Q. NO.	NAME OF PART	P.I.C. P.O. P.E.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	P.I.C. P.O. A.M.A.	QUAN.	✓
5	Nozzle Ring		C2007 -100	Note—Ream as Specified	Nozzles Below		MAKE FROM 625148-1	MS	1	
7					646538	REGULAR	NOZZLES. 75% 750-20°-R.H. LOCATIONS # 2-3-4		3	
8					633844 -14	REGULAR	NOZZLE. 69% 750-20°-R.H. LOCATION # 5		1	
9							NO 1ST OULP. NOZZLES			
0							NO 2ND OULP NOZZLES			
1										
2				NOTE:-See Reaming Diagram 633977 for locations of above Nozzles						
3	Cap Screw (For Nozzle Ring)	HS	P23T226			-162A-2	5/8"-11 x 1" long Knurled Socket Hd.		14	
4	Cap Screw (For Nozzle Ring)	HS	P23T229			-162A-2	5/8"-11 x 1-3/4" long Knurled Socket Hd.		22	
5	Lockwasher (For Above)	HS	P25R26			Cad. Pl. Steel	5/8" Shakeproof		36	
6										
7										
8	Bucket Holder Assembly	MS	612566 -25				LOCATE AS PER ARRGT. # 6 AS SHOWN ON DNG. 612566 B/M		1	
9	Cap Screw (For Bucket Holder)	HS	P23T202			-162A-2	1/2"-13 x 2-1/2" lg. Knurled Socket Hd.		4	
1	Lockwasher (For Above)	HS	P25R24			Cad. Pl. Steel	1/2" Shakeproof		4	
2	Spacer (for Bucket Holder)	HS	645997 -1						4	
3	Trip Pin Spring	HS	641557 -1				Purchased		1	
4	Trip Pin	HS	640374 -4						1	
5	Trip Pin Adj. Nut	HS	647793 -1						1	
6	Trip Pin Lockwire	HS	650093 -1						2	
7	Trip Pin Washer	HS	E-62901 -1						1	
8										
9	Rotor Assembly	STD. B/M	613987 -96				R.H. Rot. B/M		1	
0	Packing Ring Assembly	MS	625387 -29				B/M		14	

CATALOG NO. C2067-50	Type 2 BYRH	Turbine	UNIT BILL OF MATERIAL F-12
I.O. NO. C2067	For:- STANDARD OIL CO. OF CALIFORNIA		
RECORD NO. 5F65-0009A			
PREP. BY E.N. DATE 12-12-67	3 PAGES PAGE NO. 2		

ITEM NO.	NAME OF PART	F.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C. P.O. P.S.M. A.M.A.	QUAN.
	Oil Rings	HS	640927-1						4
52	Bearing Ped. Assem. (Exh. End)	STD. B/M	601987-62				B/M		1
53	Spacer (Ped. To Casing)	HS	649581-2			Steel	Make From Purchased. Washer 649581-4		4
54	Stud (Ped. To Casing)	H	646006-4						2
55	Taper Pin (Far Above Stud)	HS	P36H195			Steel	45 x 2" Long		2
56	Cap Screw (Ped. To Casing)	H	P23T289			-162A-2	7/8"-9 x 1-3/4" Long Knurled Socket Hd.		4
57	Pin (Ped. To Casing)	H	P36L228						2
58	Remachining of		638708			DRILL TAP REPAIR PISTON AS			
59	Remach. Pin		638708			SHOWN ON DWG. Z-638708			1
59	Steam Chest Assembly	STD. B/M	603156-311				B/M		1
60	Valve and Stem Assem.	MS	618234-111				3" Assem. in Above Steam Chest B/M		1
61	Valve Seat	MS	628192-4				3" Assem. in Above Steam Chest		1
62	Pin (Stm. Chest) To Casing)	H	P36L226						2
63	Nuts (Stm. Chest To Casing)	HS	P11A17			Steel	3/4"-10 Hex. S.F.		10
64	REMACHINING OF		638708			DRILL & TAP BEARING PISTON AS			1
	DRILL PISTON					SHOWN ON DWG. Z-638708			
5									
6									
7	Governor	STD. B/M	629381-64				B/M		1
8	Governor Weight	MS	633823-1						3
9									
10	Governor Levers	STD. B/M	670328-613				B/M		1
1									
2									
3									
4									
5	Assembly								1

CATALOG NO. C2067-50	Type 2BYRH Turbine	UNIT BILL OF MATERIAL E-14
For: STANDARD OIL CO. OF CALIFORNIA		
RECORD NO. 5F65-0007A		
PREP. BY E.H. DATE 12-12-64		

ITEM NO.	NAME OF PART	P.I.C. P.O. P.S.M.	CATALOG NO.	PATTERN NO.	DRAWING NO.	MATERIAL SPEC.	DESCRIPTION	R.I.C.-P.O. P.S.M. A.M.A.	QUAN.
	gear Assembly	STD. B/M	627133 - 6				2.52/1 Ratio B/M		1
2	Pinion	M	627133 - 1				MAKE FROM FORG. 635572-1		1
3	PINION SHAFT	MS	625663 - 3				B/M		1
4									
5	Gear Case	B/M	613180 - G12				B/M		1
6									
7									
8									
9									
10									
11									
12									
13	Bearing Liner Half	MS	634398 - 3						8
14									
15	Gauge (Oil Level)		627709 - 42				MAKE FROM 627709-5	H	1
16	Tube Assem. (For Above Gauge)	M	636042 - 3				B/M		1
17	Oil Pump Assembly	STD. B/M	634487 - 8				.535 Gal./100 R.P.M.		1
18	CAP SCREW (OIL PUMP TO GEAR CASE)	H	P23T136			248A-2	3/8" x 1 1/2"		4
19									
20									
21									
22									
23									
24									
25	Assembly								1

CATALOG NO.

C2067-G-3

1

C-3 GEAR

S.O. NO.

C2067

For: STANDARD OIL CO. OF CALIFORNIA

RECORD NO.

SF 65-0009A

PREP. BY E.N. DATE 12-12-68

UNIT
BILL OF
MATERIAL

F-15

1 PAGES

PAGE NO. 1

1965

A Division

Inlet Corporation

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO.		PART NAME		BYEN-# C-3 L.H. Ref. L.H. Output		F.I.C.		APPARATUS TURBINE		DRAWING NO.	
619159-621		OIL PIPING									
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/M	F.I.C.	Mat. Spec.	DESCRIPTION	U/M	R.I.C.	QUAN.
1	TUBING	619159-1	CUT & BEND TO SUIT	1			TAB -125	1 1/2" OD	A	H	8.000
1	TUBING	619159-2		2			TAB -104	1" OD	C	H	13.000
1	TUBING	619159-3		3			TAB -077	3/4" OD	C	H	5.000
1	TUBING	619159-4		4			TAB -064	5/8" OD	C	H	7.000
1	TUBING	619159-5	Y	5			TAB -055	1/2" OD	C	H	8.000
1	CHECK VALVE	P62B14	1"-125"	6		HS	BR				
1	RELIEF VALVE	P65D11	3/4-125" 3500 PSI	8		MS	BR				
1	SIGHT FLOW INDICATOR	P70Q11	3/4"	9		MS	BR				
1	GLOBE VALVE	P62A11	1/4-125"	10		H	BR				
1	HAIF NIPPLE	PA1T40	1/4-80 x 1 1/2"	11		H	171				
1	OIL PRESS GANGE	P52A19	3 1/2" DIAL. GAUG. 0-30"	12		H					
1	TUBE COUPLING	PA7A26	1 1/2" M.	13		H	37L				
2	TUBE COUPLING	PA7A25	1" M	14		H	37L				
2	TUBE COUPLING	PA7B24	1" F.	15		H	37L				
2	TUBE COUPLING	PA7A22	3/4" M	17		H	37L				

ORDER NO.	PART NO. 619159-621	DISTRIBUTION					Prepared By: <u>WHE. RCH</u>	L.S.
QUANTITY							Date: <u>12-23-64</u>	1-8-65
DATE REQUIRED								

F-16

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO. 619159-621		PART NAME OIL PIPING BYEN - C-3 L.H. P.T. L.H. DEPART		F.I.C.	APPARATUS TURBINE	DRAWING NO.	
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	MAKE FROM
							DESCRIPTION
1	TUBE ELBOW	PA7H24	1" 90° F	20		H	STL
1	TUBE ELBOW	PA7G24	1" 90° M	21		H	STL
2	TUBE ELBOW	PA7F18	1" 45° F	22		H	STL
1	TUBE ELBOW	PA7G22	3/4" 90° M	23		H	STL
2	TUBE ELBOW	PA7G18	1/2" x 3/8" 90° M	24		H	STL
1	TUBE UNION	PA7D16	5/8" x 1/2"	25		H	STL
2	DRIFILE PLUG	692789-5	1/8" DRIF.	26		M	
2	PIPE NIPPLE	PA1Y19	1" - 80 x 2 1/2	27		H	171
2	PIPE NIPPLE	PA1X14	3/4" 80 x 2	28		HS	171
2	PIPE NIPPLE	PA1Y24	3/4" 80 x 2	29		H	171
2	REDUCING BUSHING	PA1V31	1 1/2" x 1"	31		H	STL
4	REDUCING BUSHING	PA1V20	1" x 3/4"	32		HS	STL
1	REDUCING BUSHING	PA1V30	1 1/2" x 1 1/4"	33		H	STL
1	REDUCING BUSHING	PA1V32	1 1/2" x 3/4"	34		H	STL
2	STREET ELBOW	PA1L15	1" - 90°	35		H	M.I.
1	PIPE PLUG	PA0L11	1/4" HEX	36		H	STL

ORDER NO.	PART NO. 619159-621	DISTRIBUTION	Prepared By MPP - RCM	12/5
QUANTITY			Date 12/23/64	1-8-65
DATE REQUIRED				

A. Divisio

Carrier Corporation

MANUFACTURING BILL OF MATERIAL

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT DETAIL - PARTIAL - STANDARD.

PART NO. 619159-GR1	PART NAME OIL PIPING	BYRN - C-3 L.H. ROY - L.H. DEPART	F.I.C.	APPARATUS TURBINE	DRAWING NO.
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[illegible]

ORDER NO.	PART NO.	DISTRIBUTION	Prepared By
	619159-661		WAGE. RAN L.S.
QUANTITY			Date
			12-23-64 1-8-65
DATE REQUIRED			

13402

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7-19

MANUFACTURING BILL OF MATERIAL
APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

PART NO. 613180-G12		PART NAME GEAR CASE			F.I.C.	APPARATUS 12 TURBINE		DRAWING NO.			
QUAN.	PART NAME	PART NO.	REFERENCE OR DRAWING NO.	ITEM NO.	U/ M	F.I.C.	Matl. Spec.	DESCRIPTION	R.I.C.	QUAN.	✓
1	GEAR CASE & CAP	601479-11	B/M	2.		M					
1	BAFFLE	647559-3	B/M	5.		MS					
1	COVER	647561-1		8.		M					
1	BAFFLE	634399-3	B/M	9.		M					
1	SPRAY NOZZLE ASSY.	634378-10	B/M	12.		M					
1	GASKET	691698-1		13.		H					
1	WASHER	647545-1		14.		H					
1	LOCKWASHER	647546-1		15.		H					
1	CAP NUT	P14R19	1"-8	16.		H	BRASS				
1	BALL BEARING	647226-2		21.		MS					
1	SLEEVE	647556-1		22.		MS					
1	WASHER	690433-1		23.		H					
1	GASKET	P59Y11		24.		H	VELL.				
1	SHIM	647557-1		26.		HS					
2	SHIM	647557-2		27.		HS					
5	SHIM	647557-3		28.		H					
1	KEY	641388-178		29.		H					
1	LOCKWASHER	P28A26	W-16	30		HS					

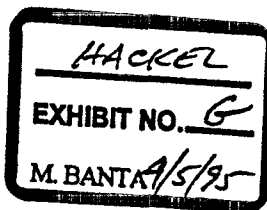
ORDER NO.	PART NO. 613180-G12	DISTRIBUTION	Prepared By: G.B.
QUANTITY			Date: 5-13-64
DATE REQUIRED			

4-30

APPARATUS ORDER - ASSEMBLY AND TEST - UNIT - DETAIL - PARTIAL - STANDARD

444
462
025

[illegible]



WORKING TOLERANCES UNLESS OTHERWISE SPECIFIED		SURFACE ROUGHNESS	
MACHINING	FABRICATING		
±.010" TO 2"	±.01" TO 24"	125	16
±.015" 2" TO 10"	±.015" 24" TO 24"	32	32
±.030 OVER 10"	±.03" OVER 24"	63	63
ANGLES ±1°		125	125
ALL THREADS CLASS 2 FIT		250	250
		500	500
		1000	1000

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45	1/2	1"	2"
44	15/16	2	1 1/2"
43	7/16	3/4	1 1/2"
42	5/8	1	1 1/2"
41	5/8	1	1 3/4"
40	1	1 3/4	1 1/2"
39	1/2	1 5/16	1 1/2"
38	FEATURES RELEVANT TO USE		

PART STENCIL BOX DIA FRAME
NO. A B C

MAKE FROM PT #1-2 RINGS →
MAKE FROM PT #20-4 RINGS →
MAKE FROM PT #2 →
MAKE FROM PT #4 →
4 RINGS →
SEE NOTE A →
3 RINGS →
6 RINGS →

37	5/8	1 1/2	1
36	7/8	1 3/4	1
35	3/8	7/8	1 1/2
34	1	1 3/4	1
33	5/8	1 1/2	1 1/2
32	1/2	1	1 1/2
31	3/4	1 1/2	1 1/2
30	1/2	1	1
29	3/4	1 1/2	1 1/2
28	1/2	1	1 3/4
27	3/4	1 1/2	3/4
26	3/8	7/8	1 1/2
25	1 3/4	2 3/4	3/4
24	3/8	7/8	1 1/2 RINGS
23	7/8	2 5/8	2 3/8
22	1/2	1	1 3/16
21	1 1/2	2 1/2	5/8
20	1	1 3/4	2
19	1/4	3/4	1 5/8
18	3/8	7/8	1
17	3/4	1 1/2	1 1/4
16	2 1/2	3 1/2	
15	2 1/4	3 1/4	
14	2	3	1 3/8
13	1 7/8	3	2 1/4
12	1 3/4	2 3/4	2
11	1 5/8	2 5/8	
10	1 1/2	2 1/2	2 1/8
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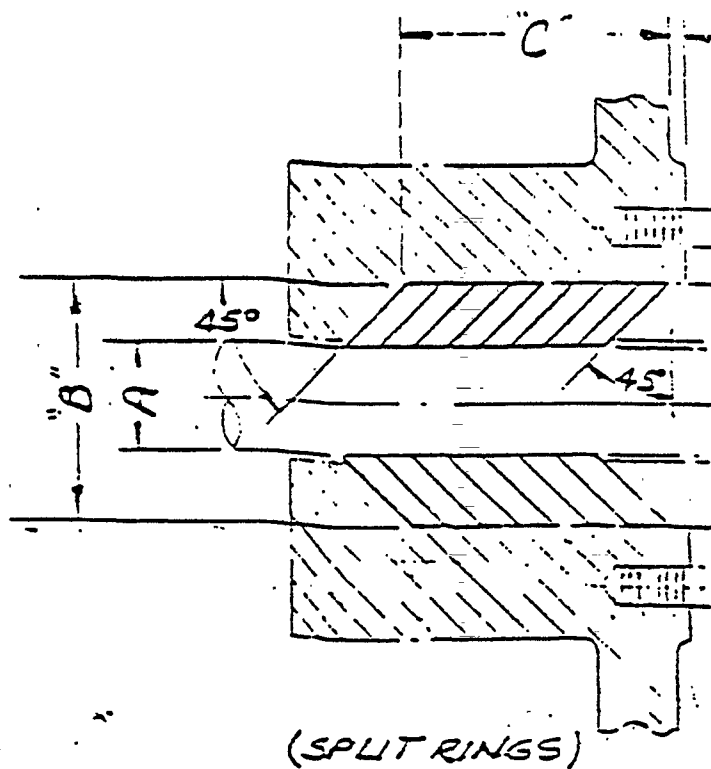
PART STENCIL BOX DIA FRAME
NO. A B C

PACKING FLEXIBLE
JOHN CRANE

SIMILAR TO		DR.		ENG. AP.	SCALE NTS	FIRST S.O.
S-645710 S-694775 S-624199 S-642053		CK.		MFG. AP.		
PROCESS SPECS.		DES. AP.		MET AP.	DATE 2 6 59	ASSEMBLY
NOT RELEASED FOR MANUFACTURE		ELLIOTT COMPANY				
RELEASED FOR MANU- FACTURE		A DIVISION OF CARRIER CORPORATION				
		JEANNETTE, PA.				

Z-637387

Z-637387



(SPLIT RINGS)

NOTES:

- A- FOR PART #29 PACKING CON WITH LANTERN GLAND.
- B- PACKING RINGS TO BE N
- C- PACKING RINGS TO BE S
- D- VENDOR TO PRESS PAC (CHEVRON) SHAPE.
- E- SUITABLE FOR 850°
- F- MAKE FROM JOHN CRANE

MACHINING	FABRICATING	
±.010" TO 2"	±.010" TO 24"	16
±.015" 2" TO 10"	±.015" 24" TO 100"	32
±.030 OVER 10"	±.030 OVER 24"	63
ANGLES ±.1°		130
		250
		500
		1000
ALL THREADS CLASS 2 FIT		

37	5/8	1 1/2	1
36	7/8	1 3/4	1
35	3/8	7/8	1/2
34	1	1 3/4	1
33	5/8	1 1/2	1/2
32	1/2	1	1/2
31	3/4	1 1/2	1/2
30	1/2	1	1
29	3/4	1 1/2	1 1/2
28	1/2	1	1 3/4
27	3/4	1 1/2	3/4
26	3/8	7/8	1 1/2
25	1 3/4	2 3/4	3/4
24	3/8	7/8	1 1/2 RINGS
23	7/8	2 5/8	3 3/8
22	1/2	1	1 3/16
21	1 1/2	2 1/2	5/8
20	1	1 3/4	2
19	1/4	3/4	1 3/8
18	3/8	7/8	1
17	3/4	1 1/2	1 1/4
16	2 1/2	3 1/2	
15	2 1/4	3 1/4	
14	2	3	1 3/8
13	1 7/8	3	2 1/4
12	1 3/4	2 3/4	2
11	1 5/8	2 5/8	
10	1 1/2	2 1/2	2 1/8
9	1 3/8	2 3/8	2 1/4
8	1 1/4	2 1/4	2 1/8
7	1 1/8	2	
6	1	2	2
5	7/8	1 5/8	1 5/8
4	3/4	1 1/2	1 3/4
3	5/8	1 1/8	1 1/2
2	1/2	1	1 1/2
1	3/8	7/8	1 5/8

PART ITEM ON BOX DIA PK. SPA. NO A B C

ENGINE	CHANGES
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100	100

PACKING FLEXIBLE
JOHN CRANE

SCALE NTS FIRST S. O.

DATE 2 6 59 ASSEMBLY

COMPANY
CARRIER CORPORATION
NETTE, PA.

Z-637387

Elliott

NOTICE

PERSONNEL NOTICE 19-73

June 25, 1973

SAFETY AND HEALTH

Effective immediately and from this point on, all employees handling asbestos material of any kind must wear a dust mask during periods of handling.

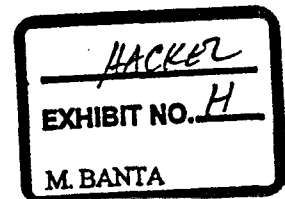
Asbestos fibers are capable of producing severe harmful effects. In this respect, dust masks must be worn to prevent any undue exposure to the fibers.

Supervisors will make certain that their employees wear the necessary dust masks when handling asbestos material of any kind.

J. Barton Delaney

CC: 4:04
4:05

MR. JOHN H. BECKER	14- 7
MR. DARWIN W. CROCKER	48-11
MR. SAMUEL R. FERARI	1-10
MR. LEONARD FRANZAK	1- 1
FIRST AID DEPARTMENT	41- 1
MR. RANDALL J. GEBHARDT	45- 5
MR. GEORGE A. HANSEN	5- 2
MR. RALPH E. HICKMAN	34-10
MR. GEORGE KOCHIK	43- 4
MR. DONALD P. MULL	1- 2
MR. ROBERT S. MUSE	1-16
MR. CLYDE D. McCLELLAND	52- 2
MR. FRANK W. SMITH	48-13
MR. PAUL R. SMIH	1- 8
MR. KEITH TOBIN	65- 6
MR. VINCENT G. WEIGERS	34-10A



Approved for posting: *[Signature]*

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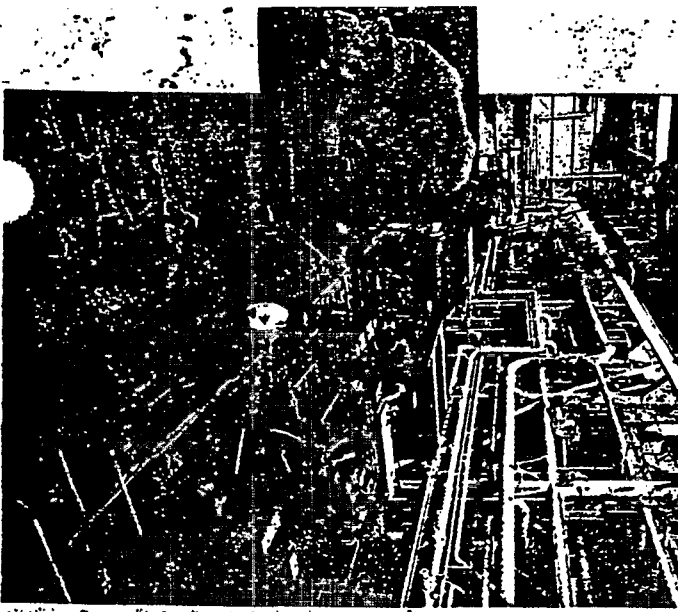
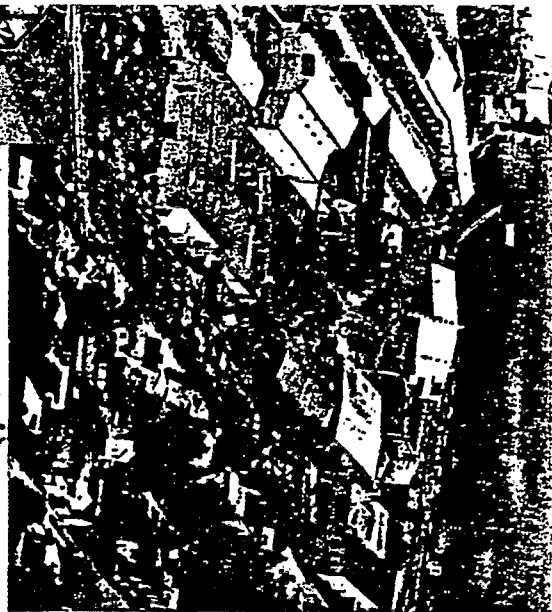
1-800-488-4242

ELLIOTT

Welcome to....

WACER
EXHIBIT NO. I

M. BANTA



As the history of Elliott Turbomachinery Company unfolds, it is clearly evident that since its founding, Elliott has upheld a proud tradition of innovation, excellence, and outstanding product quality.

Elliott Turbomachinery Company has had a rich and varied past. Through effective leadership and the dedication of thousands of employees over the years, Elliott has continually retained its status as one of the premier manufacturers of turbomachinery products worldwide. By strategically taking advantage of available business opportunities and effectively responding to market trends, Elliott has grown in both size and prominence as a leader in the turbomachinery industry.

Although impressive, Elliott's history has not been untouched by turbulence. Shortly after being acquired by United Technologies Corporation (UTC) in 1979, fluctuations in the oil and petrochemical industries worldwide began to adversely impact Elliott's profitability. In 1986, UTC decided that Elliott did not coincide with their core business structure, and subsequently put the company up for sale.

Elliott's senior management team simply refused to let the Elliott tradition fade into obscurity, however. As a result, in 1987, a group of investors including Elliott's senior management team members, successfully purchased Elliott from UTC via a Leveraged Buy-Out.

Through strong leadership and the concerted effort of over 1800 talented employees at Elliott sales and service locations worldwide, Elliott has operated as an increasingly profitable, self-reliant organization since the Leveraged Buy-Out.

It is with great pride that Elliott remains a thriving, vital facet of the worldwide turbomachinery industry. Our goal is to continue to serve our clients with the quality Elliott products and services that they have come to know and expect, while maintaining an environment in which our employees may grow professionally, and proudly continue as very integral members of the winning Elliott team.



And so, *The Tradition Continues*. As we look back on the past we see that resiliency, hard work, and perseverance in achieving our goals run as consistent themes throughout our history. As we look to the future, we find that those old-fashioned ideals can still apply, even in our fast-paced, technologically changing world. The lessons of our rich and varied past serve to better enable us to conquer the challenges of the future.

At Elliott, we anxiously await the promise of tomorrow.

Paul R. Smy
Paul R. Smy
Chairman and C.E.O.



William
Swan
Elliott

1895 Chicago Boiler Cleaner Co. is formed using patent rights from a young engineer named William Swan Elliott. The patent is for a water motor and "freely-swinging arm" used to clean scale from boiler tubes.

1910 Elliott is incorporated on May 19.

1914 Elliott moves to Jeannette, Pennsylvania.

1916 Elliott acquires Argenta Manufacturing Co. This acquisition broadens Elliott's scope in tube cleaning tools.

1924 Elliott purchases Kerr Turbine Company.

1926 Elliott purchases Ridgway Dynamo & Engine Co. Elliott now has a line of generators and compressors to complement their newly acquired turbine line.

1934 Elliott consolidates compressor and turbine manufacturing in Jeannette.

1941 First turbocharger installation on diesel engines in the United States is made by Elliott.

1942 All Elliott plants convert to production of war material. Elliott receives the Army and Navy "E" for excellence in manufacturing and productivity.

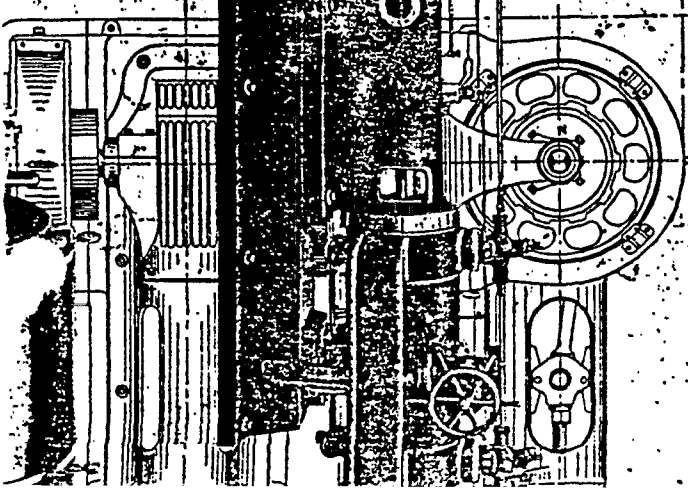
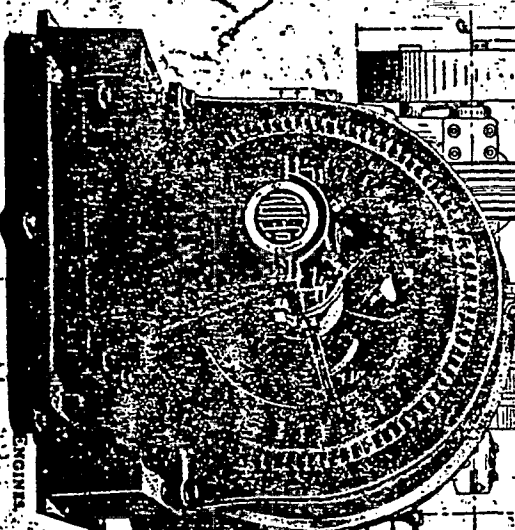
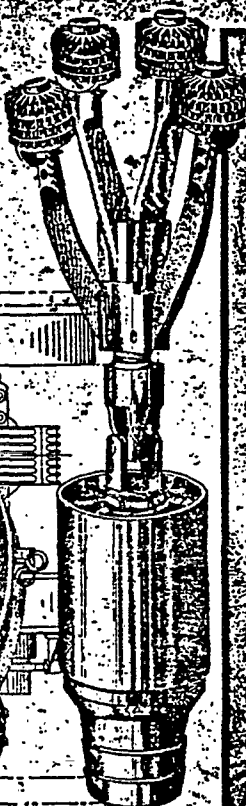
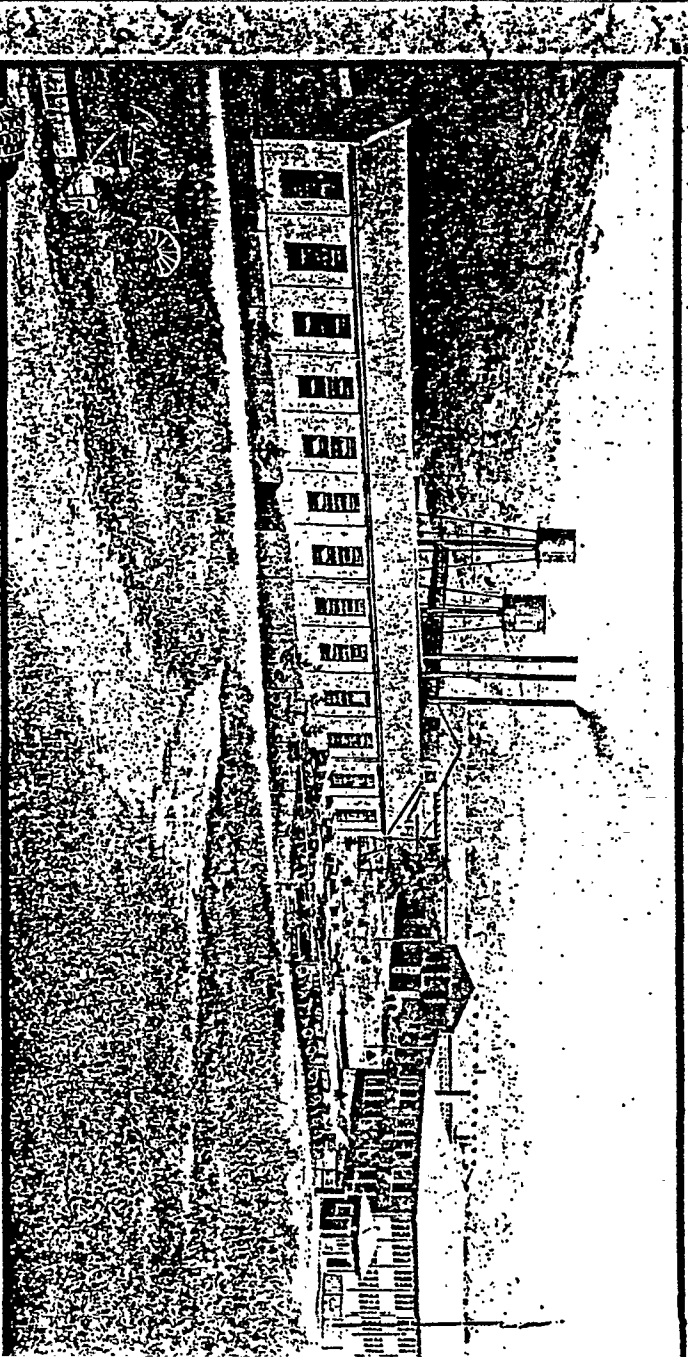
1957 Elliott becomes a Division of Carter Corporation.

1962 Elliott introduces the PAP Plant Air Package® a light weight, three stage centrifugal air compressor.

1967 Elliott Overseas Corporation is formed and Elliott enters a "multi national era".

1968 Ebara Manufacturing Company Japan, is licensed to manufacture Elliott designed turbomachinery.

Introduces the world's highest pressure 2000 psi/653 bar compressor for

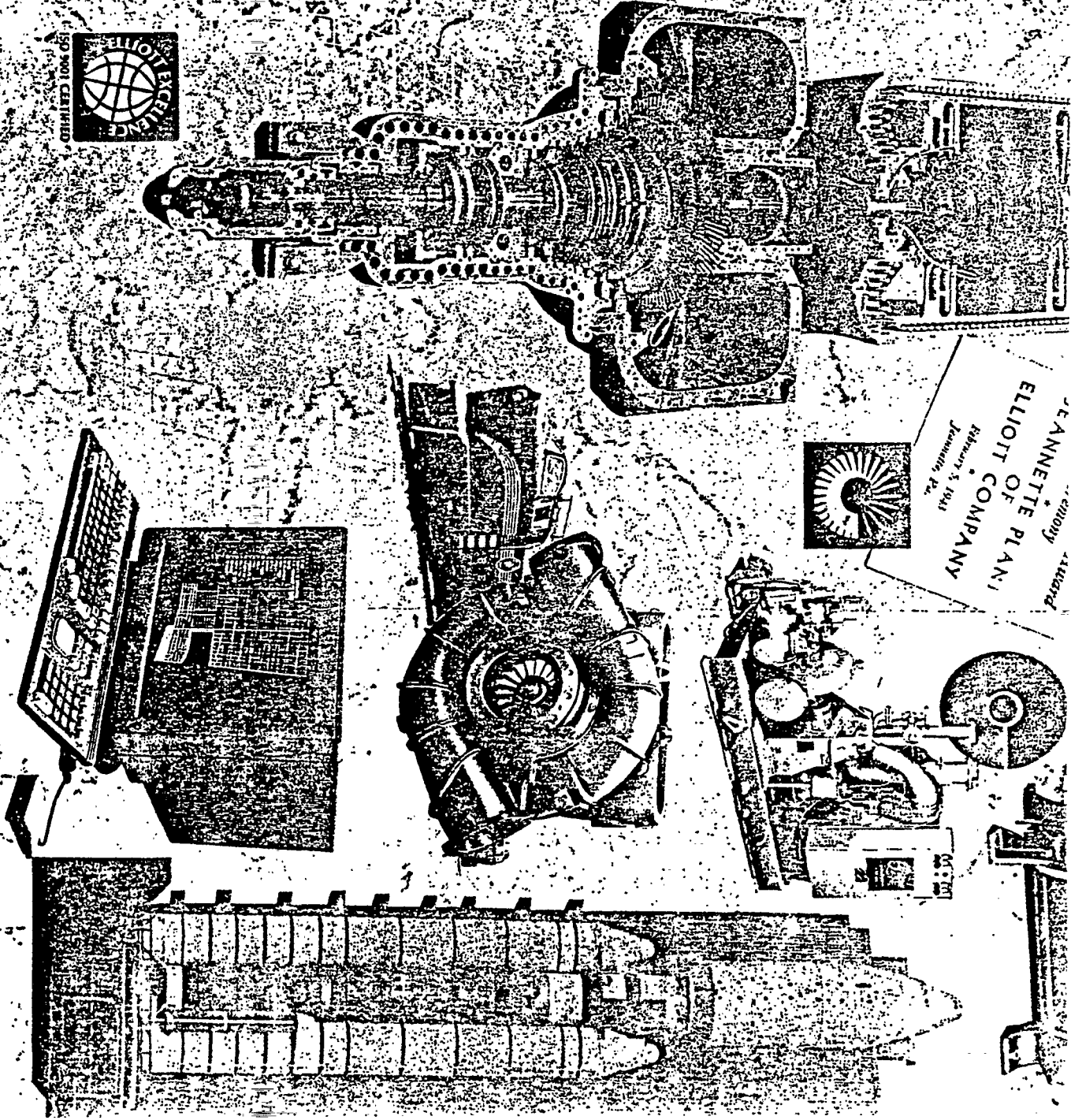


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RIDGWAY DYNAMO & ENGINE CO.

ELLIOTT

Elliott Company has sales, service, engineering facilities throughout the world. Whatever your application, our service team, an Elliott Field Engineer or Sales Representative will gladly assist you anytime or anywhere. Just call one of the following Elliott locations:

Welcome



JEANETTE PLANI
ELLIOTT COMPANY
February 5, 1991
Jenning, Pa.

ELLIOTT

- 1983 Elliott supports a new U.S. formed joint venture, a major U.S. owned and operated facility in London, England, and a Panamanian subsidiary in Panama, Central America.
- 1985 Industrie De Hout, Mexico, a U.S. subsidiary, manufactures Elliott designed equipment.
- 1987 Elliott Acquisition Corporation, a company comprised of Elliott management and outside investors, purchases Elliott Company equipment technologies.
- 1988 Elliott service expands by adding shops in San Francisco, CA; Houston, TX; England and Japan.
- 1989 Elliott and MAN/AGH in Obenhansen, Germany, sign a fossil-fueled agreement.
- 1989 Elliott enters the "Space Age" through the manufacture and supply of VC mechanical parts for the United States Titan Missile Program.
- 1990 Elliott Service adds shop in Chicago, Illinois.
- 1992 Elliott ships first "Self-Compressor" with magnetic bearings, gas seals and microprocessor for Elliott Doble System (EDS) microprocessor control system.
- 1992 Elliott Service opens another shop in a Specialized facility.
- 1992 Elliott receives certification as an ISO 9001 manufacturer.
- 1992 Elliott Service opens new shop in Baton Rouge, Louisiana.
- 1992 Elliott acquires ISI, Inc., a manufacturer and repair facility for turbochargers, and the tradition continues.

