

**PLAINTIFF'S
EXHIBIT**

CHV-64

**UNITED
CENTRIFUGAL
PUMPS**

MAIN OFFICES AND PLANTS: 1132 NORTH 7TH STREET, SAN JOSE, CALIFORNIA
SALES OFFICES: LOS ANGELES • NEW YORK • HOUSTON • TULSA • CLEVELAND • CHICAGO • ST. LOUIS
DENVER • DETROIT • KANSAS CITY • NEW ORLEANS • SEATTLE • AMARILLO

Ed MAA
March 1, 1968

MAR 7 1968

E. S. MAA

1231 LUMPKIN ROAD
HOUSTON, TEXAS 77043
(713) 464-5691
TWX-910-881-1727
P.O. BOX 55547
HOUSTON, TEXAS 77055

Standard Oil Company of Texas
P. O. Box 20032
El Paso, Texas 79990

Inquiry No. QR - Centrifugal Pump
Your Item No. G-1927-1
UCP File H-5504, Supplement No. 1

Attention: Mr. J. E. Mueller

Dear Sir:

This will confirm our conversation of this date regarding the change from
a 7 1/2 HP motor to a 60 HP motor on your Item G-1927-1.

Total Price each, for a United M-1 1/2 x 13-VP with a 60 HP FEEC
VSDN motor ----- \$2237.00

Estimated freight to El Paso, Texas ----- \$ 82.00

Weight of Pump and Motor ----- 1580 pounds

Shipment could be effected within 15 to 17 weeks after receipt of your
order.

All other conditions of sale remain the same as stated in our original
quotation.

If we can be of farther assistance, please contact us.

Very truly yours,

UNITED CENTRIFUGAL PUMPS

Ted N. Powell

TNP/car
Letter in Triplicate

cc: UCP San Jose

CHEV BB
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MAIN OFFICES AND PLANTS: 1132 NORTH 7TH STREET, SAN JOSE, CALIFORNIA
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March 1, 1966

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HOUSTON, TEXAS 77043
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P.O. BOX 55547
HOUSTON, TEXAS 77055

Standard Oil Company of Texas
P. O. Box 20002
El Paso, Texas 79953

Inquiry No. QR - Centrifugal Pump
Your Item No. C-1927-1
GCP File H-5534, Supplement No.

Attention: Mr. J. E. Miller

Gentlemen:

This will confirm our conversation of this date regarding the change from
a 7 1/2 HP motor to a 15 HP motor to your Item C-1927-1.

Total Price each, for a United A-1 1 1/2 x 13-VF with 150 HP IEFC VSDNF motor	\$2237.00
Estimated freight to El Paso, Texas	\$ 31.00
Weight of Pump and Motor	1560 pounds

Shipment could be effected within 13 to 17 weeks after receipt of your
order.

All other conditions of sale remain the same as stated in our original
quotation.

If we can be of further assistance, please contact us.

Very truly yours,

UNITED CENTRIFUGAL PUMPS

W. E. Powell

TNP/can
Letter in Triplicate

cc: GCP San Jose

CHEV BB
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MAIN OFFICES AND PLANTS: 1132 NORTH 7TH STREET, SAN JOSE, CALIFORNIA
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DENVER • DETROIT • KANSAS CITY • NEW ORLEANS • SEATTLE • AMARILLO

February 6, 1968

P. O. Box 36151
Houston, Texas 77036

Standard Oil Company of Texas
P. O. Box 20002 J. E. BIMLER
El Paso, Texas 79998 FEB 11 1968

Inquiry No. CR-Centrifugal Pumps
UCP File H-5504

Attention: Mr. J. E. Bimler

Gentlemen:

We are pleased to submit our quotation, in triplicate, in reply to your request for quotation for pumps for your Caustic Treating Plant No. 19. We have attached your completed pump and motor data sheets and performance curves, drawings and descriptive literature describing the equipment we are offering.

We have taken exception to your specifications to quote our standard VP vertical in-line, heavy-duty process pump. The VP pump does not require a foundation or base and may be supported by the piping supports. Our latest design featuring a shaft with an integral shaft sleeve is being offered. The portion of the shaft under the throttle bushing is overlaid to protect the shaft at the closest clearance portion of the pump. This design completely eliminates the problem of leakage between the shaft and sleeve.

The General Electric TEFC motor prices are included with the pump price as vertical motors must be factory mounted to insure proper alignment between the pump and motor.

Certified outline drawings can be submitted in six to eight weeks after acceptance of an order at our factory with complete information. Spare parts lists, operation instructions and other drawings would be submitted in fourteen to sixteen weeks with performance curves being submitted shortly after shipment of the unit.

The prices shown on the data sheet are firm if accepted within thirty days and are FOB our factory, San Jose, California, with estimated freight on an LTL basis shown as a separate item. Our terms are net thirty days. The attached UCP Guarantee, Replacement and Delivery Agreement outlines the terms and conditions of warranty of all items submitted for quotation.

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Inquiry No. CR- Centrifugal Pumps
UCP File H-5504

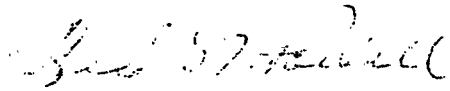
February 6, 1968

Shipment is based on the present shop backlog and the procurement of materials from our suppliers and is subject to review at the time of placing an order.

We appreciate the opportunity of submitting this quotation. If additional information is required, please contact us.

Yours very truly,

UNITED CENTRIFUGAL PUMPS


Ted N. Powell

bas/mvh
letter in triplicate
attached

cc: UCP San Jose



MAIN OFFICES AND PLANTS: 1132 NORTH 7TH STREET, SAN JOSE, CALIFORNIA 95112
SALES OFFICES: CHICAGO • HOUSTON • NEW YORK • CLEVELAND
DENVER • LOS ANGELES • NEW ORLEANS • TULSA

GUARANTEE, REPLACEMENT AND DELIVERY AGREEMENT

IF THE PRODUCT FAILS WITHIN ONE YEAR AFTER DATE OF SHIPMENT BECAUSE OF A DEFECT IN MATERIAL OR WORKMANSHIP, UNITED CENTRIFUGAL PUMPS, AT ITS ELECTION, SHALL EITHER REPAIR WITHOUT CHARGE, OR FURNISH A SIMILAR PART F.O.B. ITS WORKS, PROVIDED, (1) THE DEFECT EXISTED AT THE TIME OF SHIPMENT, AND (2) THE PURCHASER GIVES THE COMPANY IMMEDIATE WRITTEN NOTICE UPON DISCOVERY OF THE DEFECT. UNITED CENTRIFUGAL PUMPS MAY AT ITS OPTION REQUIRE THE RETURN OF THE DEFECTIVE PART, TRANSPORTATION PREPAID.

EQUIPMENT, ACCESSORIES, AND PARTS PURCHASED BY UNITED CENTRIFUGAL PUMPS FROM OTHER MANUFACTURERS ARE WARRANTED ONLY TO THE EXTENT OF THE OTHER MANUFACTURERS' WARRANTY.

NO REPRESENTATIONS OR WARRANTIES ARE MADE THAT THE PRODUCT WILL WITHSTAND EROSION OR CORROSION.

IN NO EVENT SHALL THE COMPANY BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT SOLD OR FOR INDIRECT OR CONSEQUENTIAL DAMAGES.

THE DELIVERY DATE IS ESTIMATED AS ACCURATELY AS POSSIBLE WITHOUT ANY GUARANTEE. THIS IS SUBJECT TO EXTENSIONS BECAUSE OF ACTS OF GOD, WAR, STRIKE, OR OTHER CAUSES BEYOND THE CONTROL OF UNITED.

THESE TERMS AND CONDITIONS CONSTITUTE THE ENTIRE AGREEMENT FOR THE SALE OF THE PRODUCTS COVERED HEREBY, AND THERE ARE NO OTHER REPRESENTATIONS, AGREEMENTS, GUARANTEES, OR WARRANTIES OF ANY KIND, ORAL OR WRITTEN, EXPRESSED OR IMPLIED BY LAW.

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TYPE VP PUMPS ARE VERTICAL, SINGLE STAGE, CENTRIFUGAL PUMPS. THEY ARE DESIGNED FOR CONTINUOUS DUTY AND ARE PARTICULARLY ADAPTABLE FOR REFINERY AND CHEMICAL PLANTS AND OTHER INDUSTRIAL SERVICES PUMPING FLUIDS UNDER A WIDE RANGE OF TEMPERATURES.

THE NOMINAL UPPER TEMPERATURE LIMITATION IS 650°F (340°C). REFER TO THE TECHNICAL DATA FOR RECOMMENDATION WITH REGARD TO WATER COOLING.

CONSTRUCTION:

CASE - THE CASE IS DESIGNED WITH THE SUCTION AND DISCHARGE NOZZLES ON THE SAME VERTICAL AND HORIZONTAL CENTERLINES LOCATED 180° APART. THIS DESIGN PERMITS THE UNITS TO BE INSTALLED "IN LINE" BETWEEN THE SUCTION AND DISCHARGE PIPING WITHOUT SUPPORTING FEET AND FOUNDATION. THE PUMP CAN BE DISMANTLED WITHOUT DISTURBING THE SUCTION AND DISCHARGE NOZZLES.

FLANGES - SUCTION AND DISCHARGE FLANGES ARE FURNISHED WITH 250 LBS. A.S.A. FLAT FACE ON CAST IRON CASES AND 300 LBS. A.S.A. WITH $\frac{17}{16}$ RAISED FACE ON STEEL CASES. PUMPS CAN BE FURNISHED WITH OTHER FLANGE RATINGS AND FACINGS UPON REQUEST. REFER TO GENERAL SALES FOR EXTRA COST FOR FLANGE RATINGS AND FACING OTHER THAN STANDARD.

COVER - THE COVER HAS AN INTEGRAL STUFFING BOX AND IS AVAILABLE WITH OR WITHOUT WATER JACKET WHEN CAST IN STEEL. CAST IRON COVERS ARE AVAILABLE ONLY WITHOUT WATER JACKET.

STUFFING BOX - THE STUFFING BOX IS CAST INTEGRAL WITH THE COVER. IT IS EXTRA DEEP AND FOR PACKED PUMPS IS PROVIDED WITH A LANTERN RING AND SPLIT GLAND.

SHAFT - THE SHAFT IS OF AMPLE SIZE AND IS MACHINED AND GROUND TO EXACT DIMENSIONS.

IMPELLER - THE STANDARD IMPELLER IS A CLOSED TYPE, AXIALLY BALANCED SINGLE OR DOUBLE SUCTION IMPELLER DESIGNED WITH SUFFICIENT EYE AREA TO INSURE LOW N.P.S.H. REQUIREMENTS AND REDUCE POSSIBILITY OF CAVITATION.

IMPELLER WEAR RING - IMPELLER WEAR RINGS CAN BE FURNISHED AT EXTRA COST.

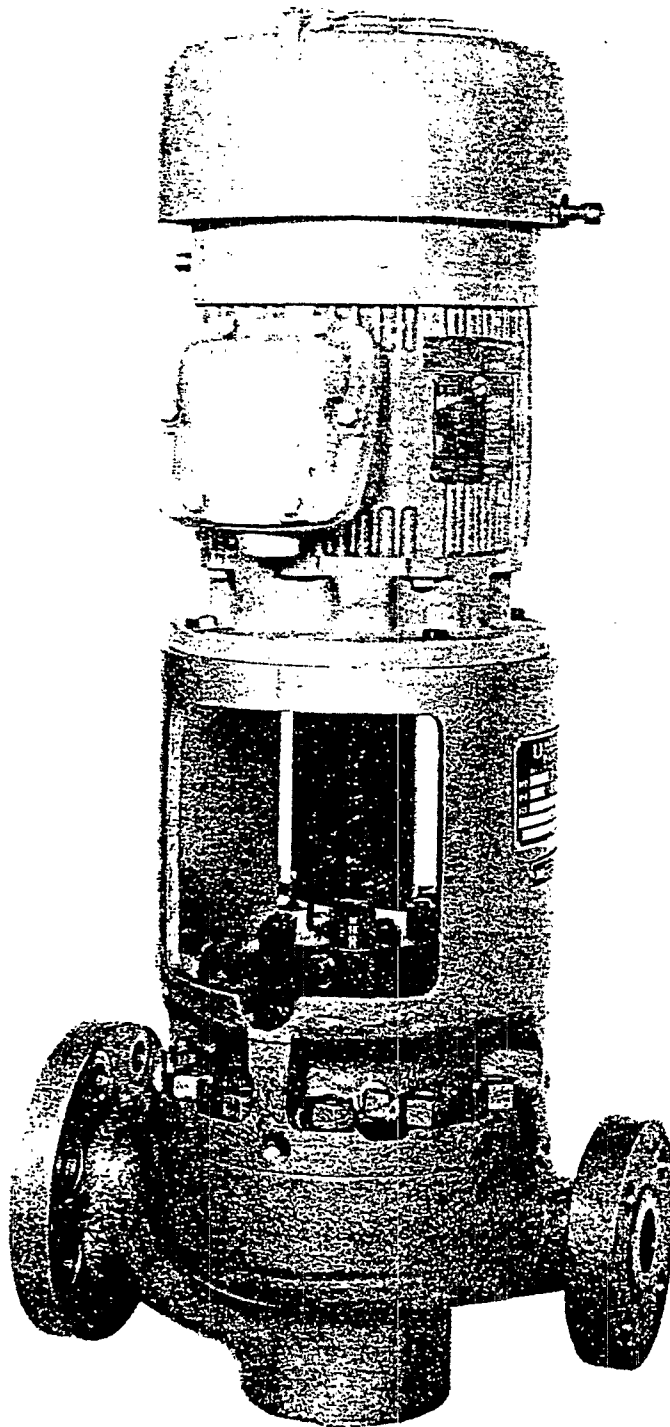
IMPELLER WEAR RINGS ARE MOUNTED ON THE IMPELLER WITH A SHRINK FIT AND PINNED IN POSITION.

CASE WEAR RING THROAT BUSHING - THE CASE WEAR RINGS AND THROAT BUSHINGS ARE INSERTED IN THE CASE AND COVER WITH A SLIGHT INTERFERENCE FIT AND SECURED WITH A HOLLOW HEAD SETSCREW.

(OVER)

- SHAFT SLEEVE -** THE SHAFT SLEEVE WHICH IS OPTIONAL IS GASKETED TO A SHOULDER ON THE SHAFT NEXT TO THE IMPELLER HUB AND IS HELD TIGHT AGAINST THE SHOULDER BY THE IMPELLER NUT. THE IMPELLER KEY ENGAGES IN A RECESS IN THE SHAFT SLEEVE TO PREVENT THE SLEEVE FROM ROTATING ON THE SHAFT. THE SLEEVE IS FREE TO EXPAND AND EXTENDS BEYOND THE PACKING GLAND. WHEN THE SHAFT SLEEVE IS NOT USED THE SHAFT IS MACHINED TO SLEEVE DIMENSION FOR PACKING OR MECHANICAL SEAL.
- GLAND -** THE PACKING GLAND IS A SPLIT TYPE GLAND AND IS PROVIDED WITH A GLAND QUENCH CONNECTION. THE MECHANICAL SEAL END PLATE IS ONE PIECE AND MAY BE PROVIDED AS FLUSH TYPE ONLY, OR FLUSH AND QUENCH TYPE WITH CLOSE CLEARANCE BUSHING. WHEN THE CLOSE CLEARANCE BUSHING IS PROVIDED THE CLEARANCE IS FROM .020" TO .025" ON DIAMETER.
- LANTERN RING -** THE STUFFING BOX OF EACH PACKED PUMP IS FURNISHED WITH A LANTERN RING FOR COLD FLUSHING OR LIQUID SEALING.
- GASKETS -** A GASKET IS PROVIDED BETWEEN THE SHAFT SLEEVE AND SHAFT SHOULDER TO PREVENT LEAKAGE BETWEEN THE SHAFT AND SLEEVE.
- A CONFINED FLEXITALLIC GASKET IS PROVIDED BETWEEN THE COVER AND THE CASE.
- IMPELLER NUT -** THE IMPELLER NUT WHEN USED IS THREADED TO TIGHTEN WITH ROTATION AND HOLDS THE IMPELLER AND SHAFT SLEEVE SECURE TO THE SHAFT.
- BEARING -** THE PUMP THRUST IS TAKEN BY THE DRIVER BEARINGS, WHICH MUST BE LOCKED TO TAKE EITHER UP OR DOWN THRUST.
- COUPLING -** THE COUPLING IS A RIGID SPACER COUPLING SPLIT PARALLEL TO THE SHAFT AND ALLOWS REMOVAL OF PACKING OR MECHANICAL SEAL PARTS.

UNITED
CENTRIFUGAL
PUMPS



"VP"
PROCESS
PUMP

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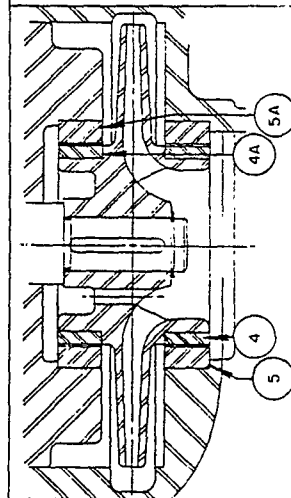


FIG 2
CLOSED IMPELLER FITTED WITH IMPELLER AND CASE WEAR RINGS
ON BOTH SIDES AND AT EXTRA COST

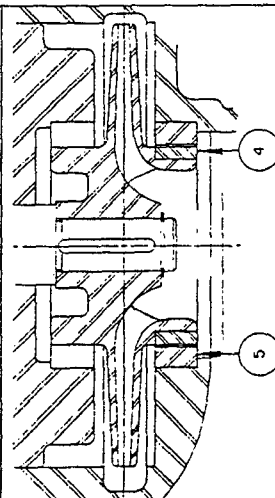


FIG 3
CLOSED IMPELLER FITTED WITH IMPELLER AND CASE WEAR RINGS
ON FRONT ONLY AND AT EXTRA COST

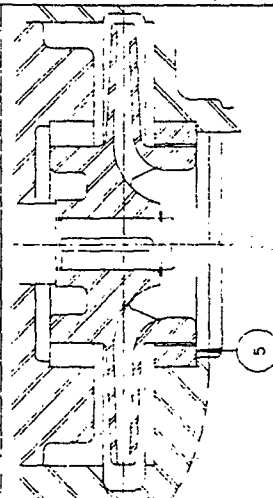


FIG 4
CLOSED IMPELLER FITTED WITH CASE WEAR RING FRONT SIDE ONLY

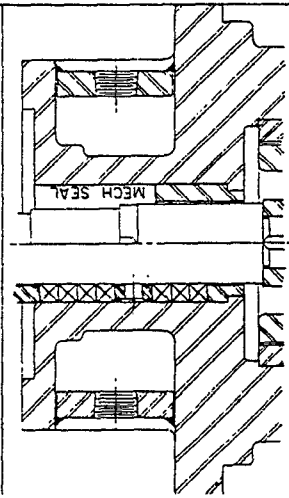


FIG 5
WATER COOLED STUFFING BOX WHEN SPECIFIED ONLY
AND AT EXTRA COST

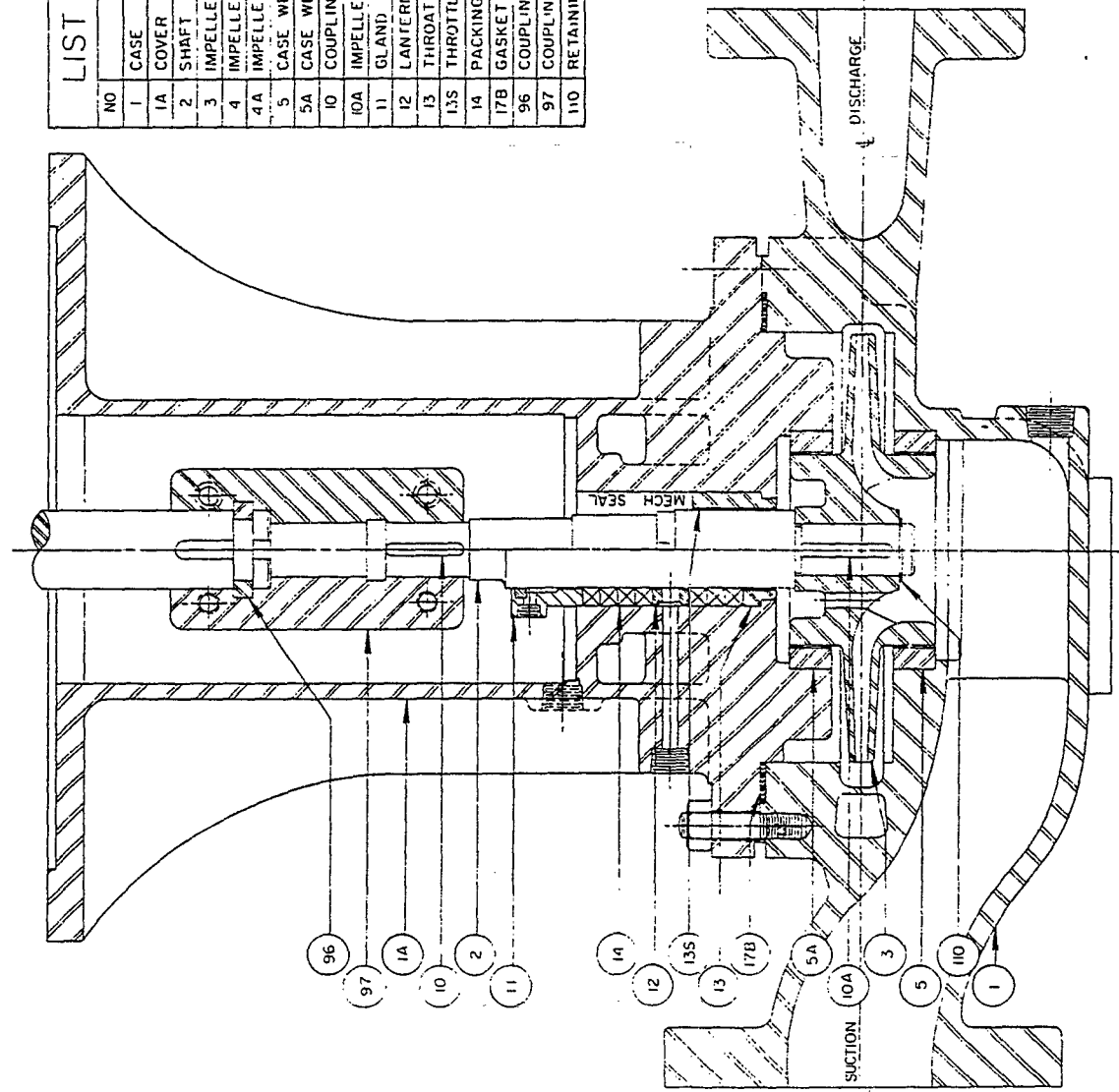


FIG. 1
STANDARD CONSTRUCTION - CLOSED IMPELLER
FITTED WITH CASE WEAR RINGS BOTH SIDES

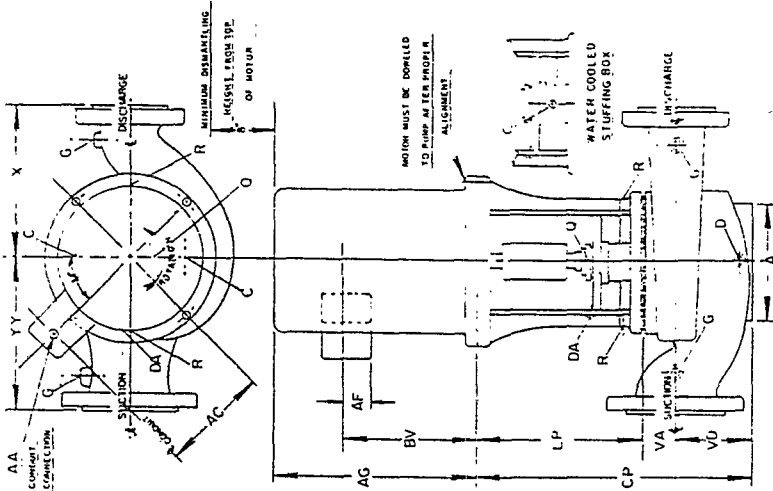
LIST OF PARTS	
NO	DESCRIPTION
1	CASE
1A	COVER
2	SHAFT
3	IMPELLER
4	IMPELLER WEAR RING
4A	IMPELLER WEAR RING
5	CASE WEAR RING
5A	CASE WEAR RING
10	COUPLING KEY
10A	IMPELLER KEY
11	GLAND
12	LANTERN RING
13	THROAT BUSHING - PACKING
13S	THROTTLE BUSHING - SEAL
14	PACKING
17B	GASKET - CASE
96	COUPLING RING KEY - SPLIT
97	COUPLING - SPL.T
110	RETAINING RING

SINGLE VOLUME	DOUBLE VOLUME
* 1 x 7	3 x 7
1 1/2 x 7 1/2	4 x 7
1 1/2 x 7	2 x 9
1 1/2 x 9 1/2	3 x 9
2 x 7	4 x 9
1 1/2 x 9 1/2	3 x 11
2 x 11	4 x 11
1 1/2 x 13	6 x 13
8 x 13	6 x 17

• AVAILABLE WITH MECH. SEAL ONLY

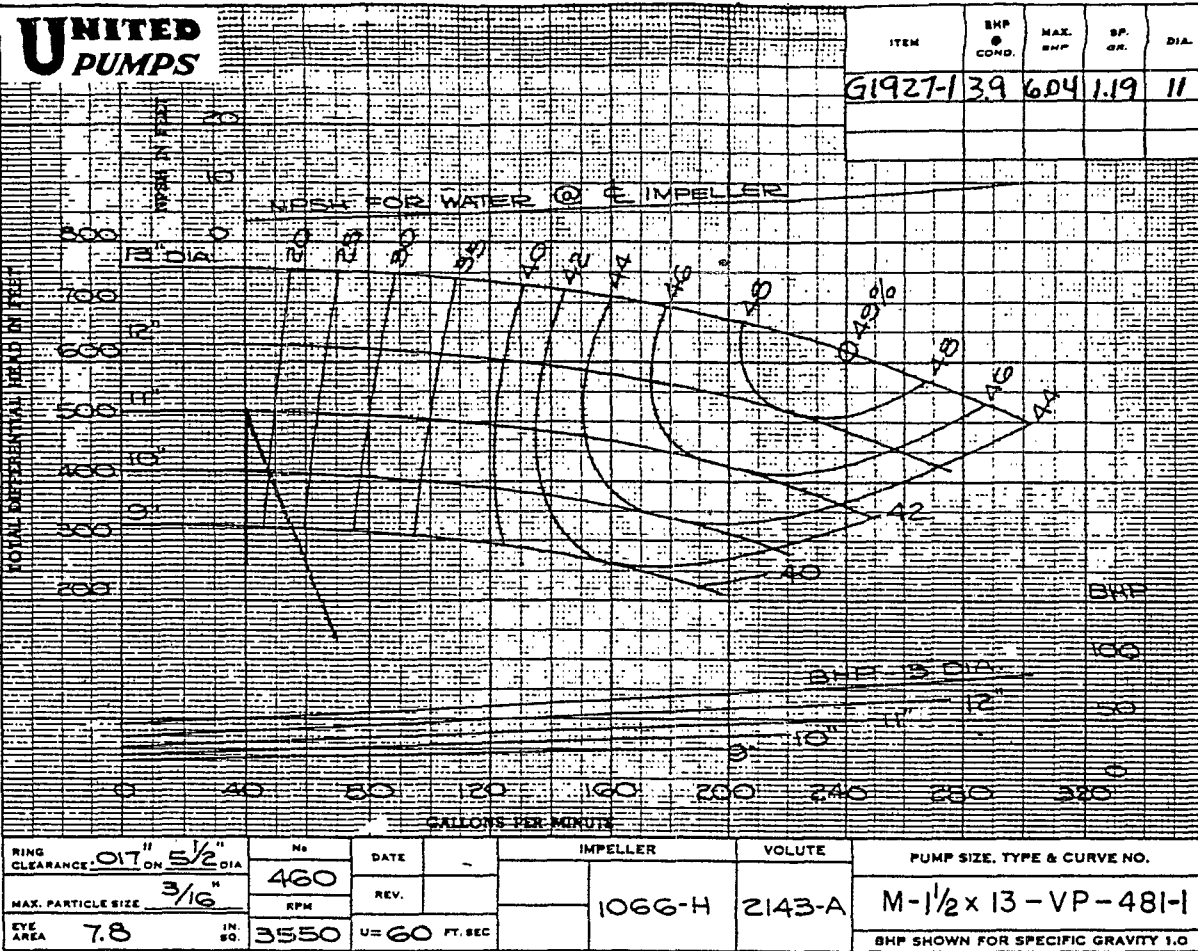
SECTIONAL DRAWING
TYPE "VP" PUMP
UNITED CENTRIFUGAL PUMPS
SAN JOSE, CALIFORNIA

PD-8681-S
REV 8/23/66

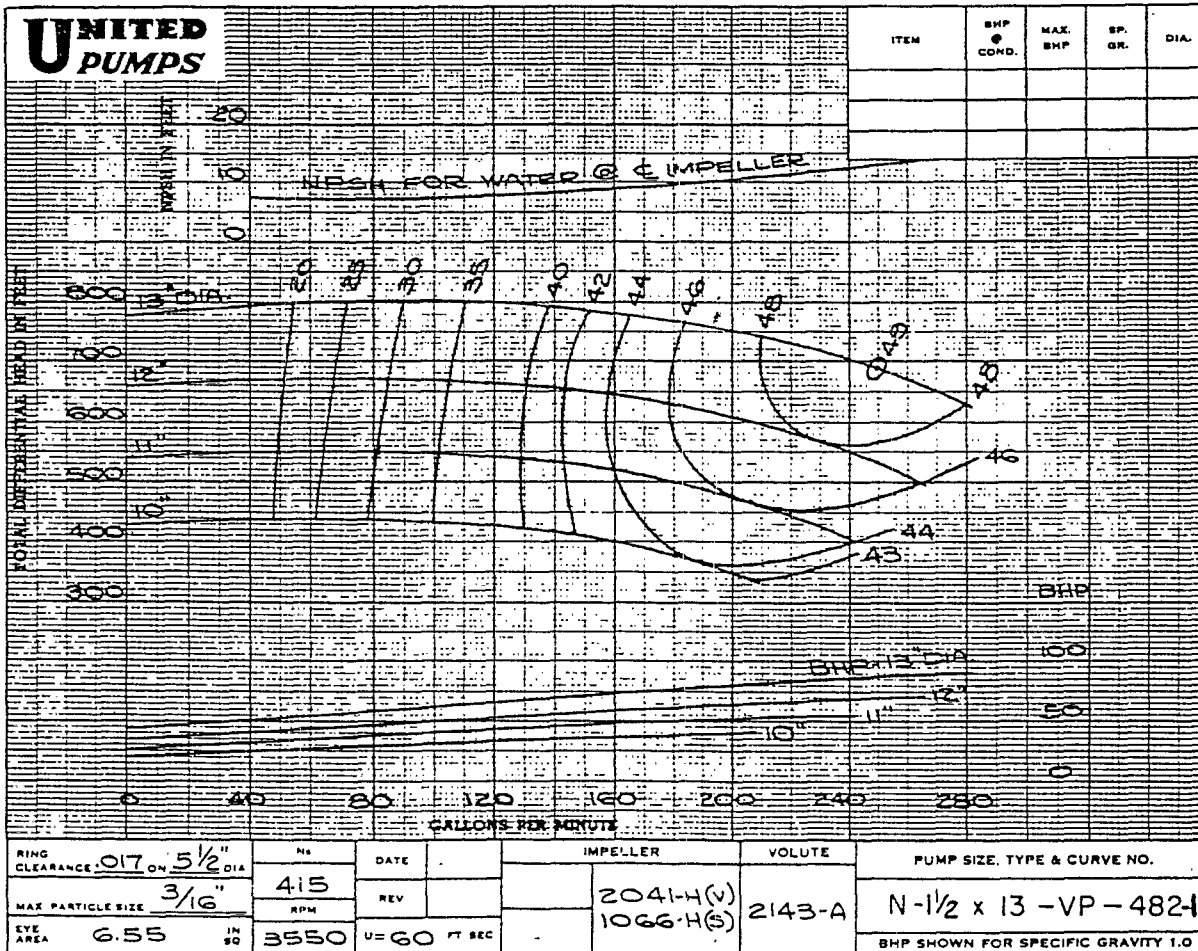
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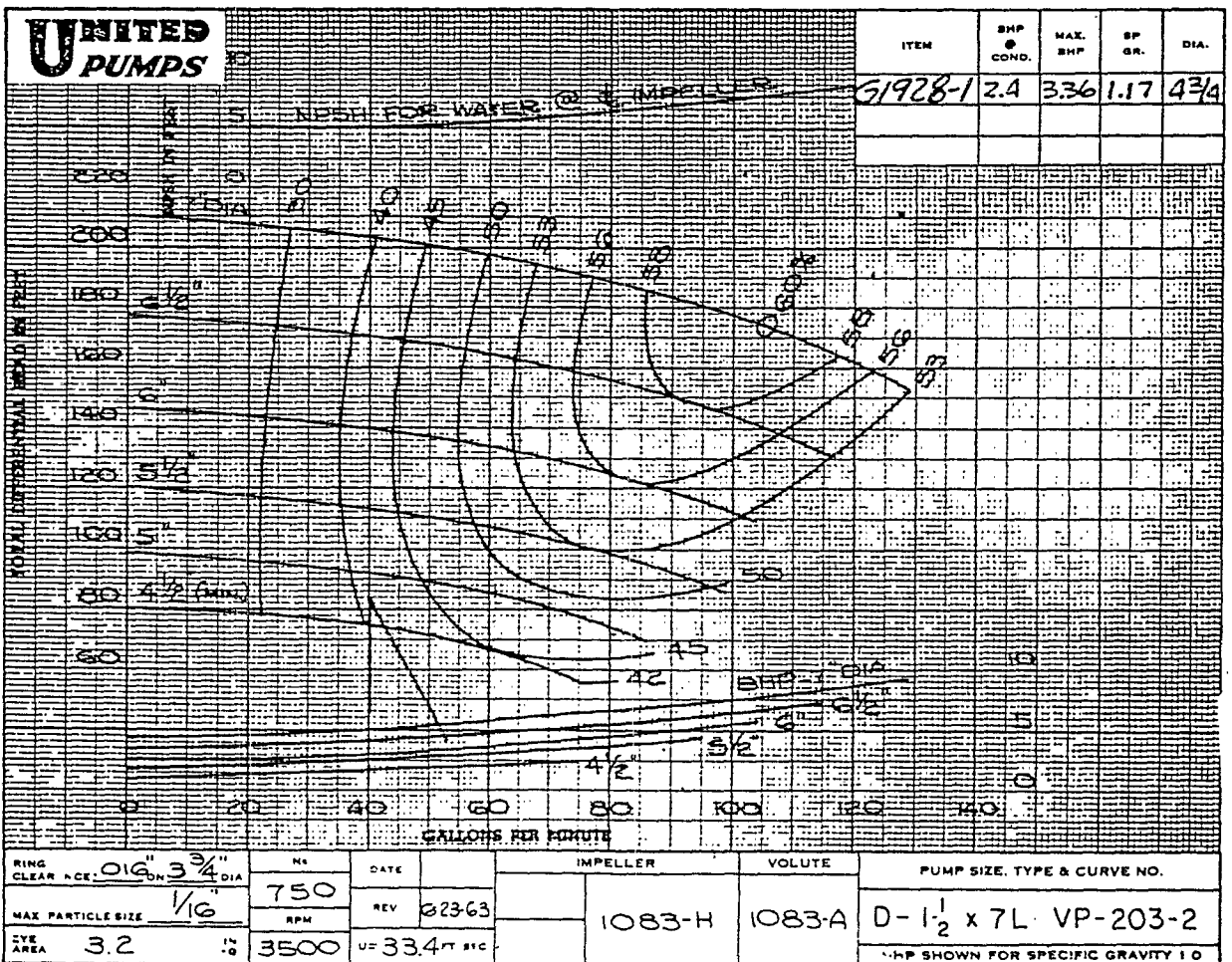
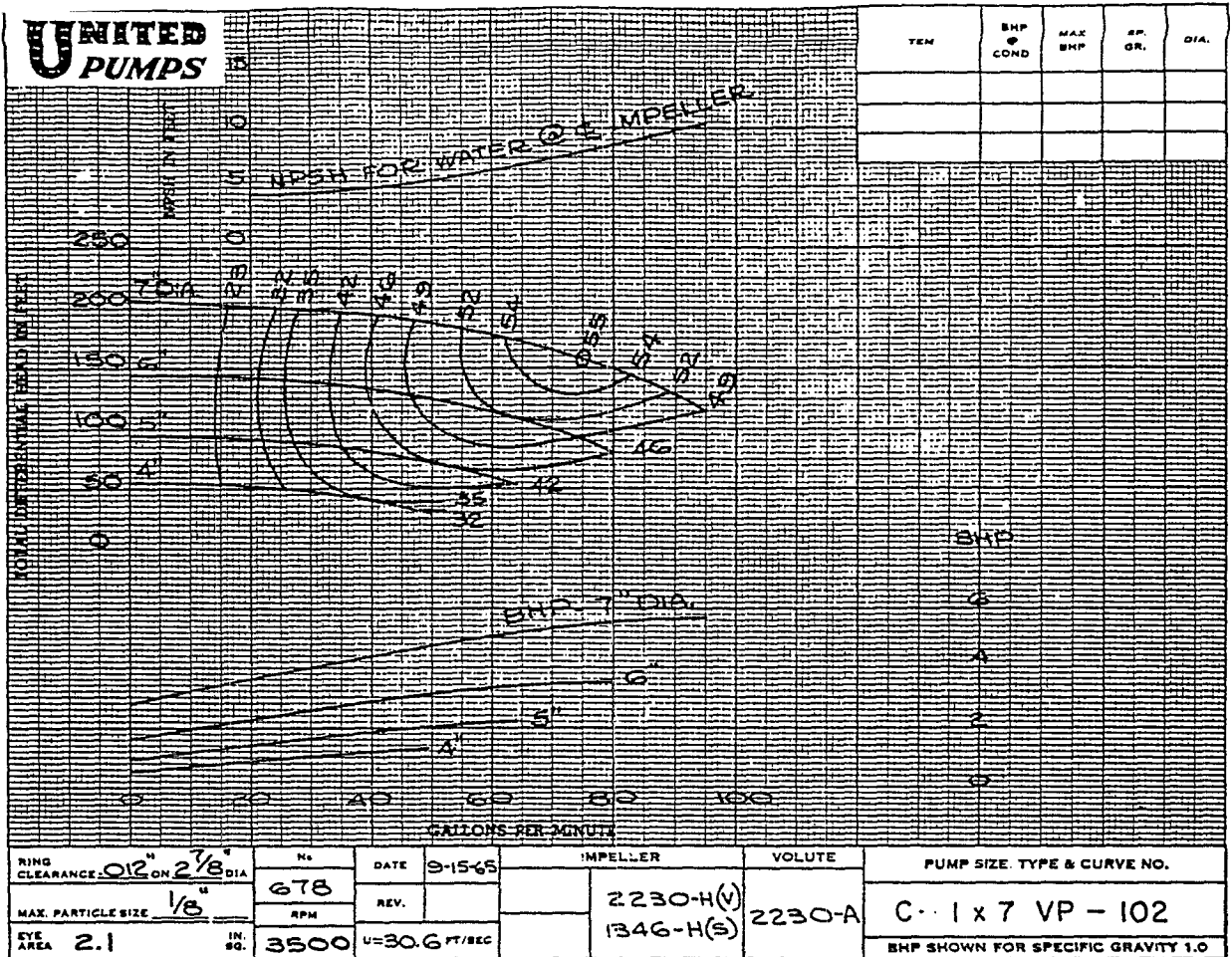
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UNITED PUMPS

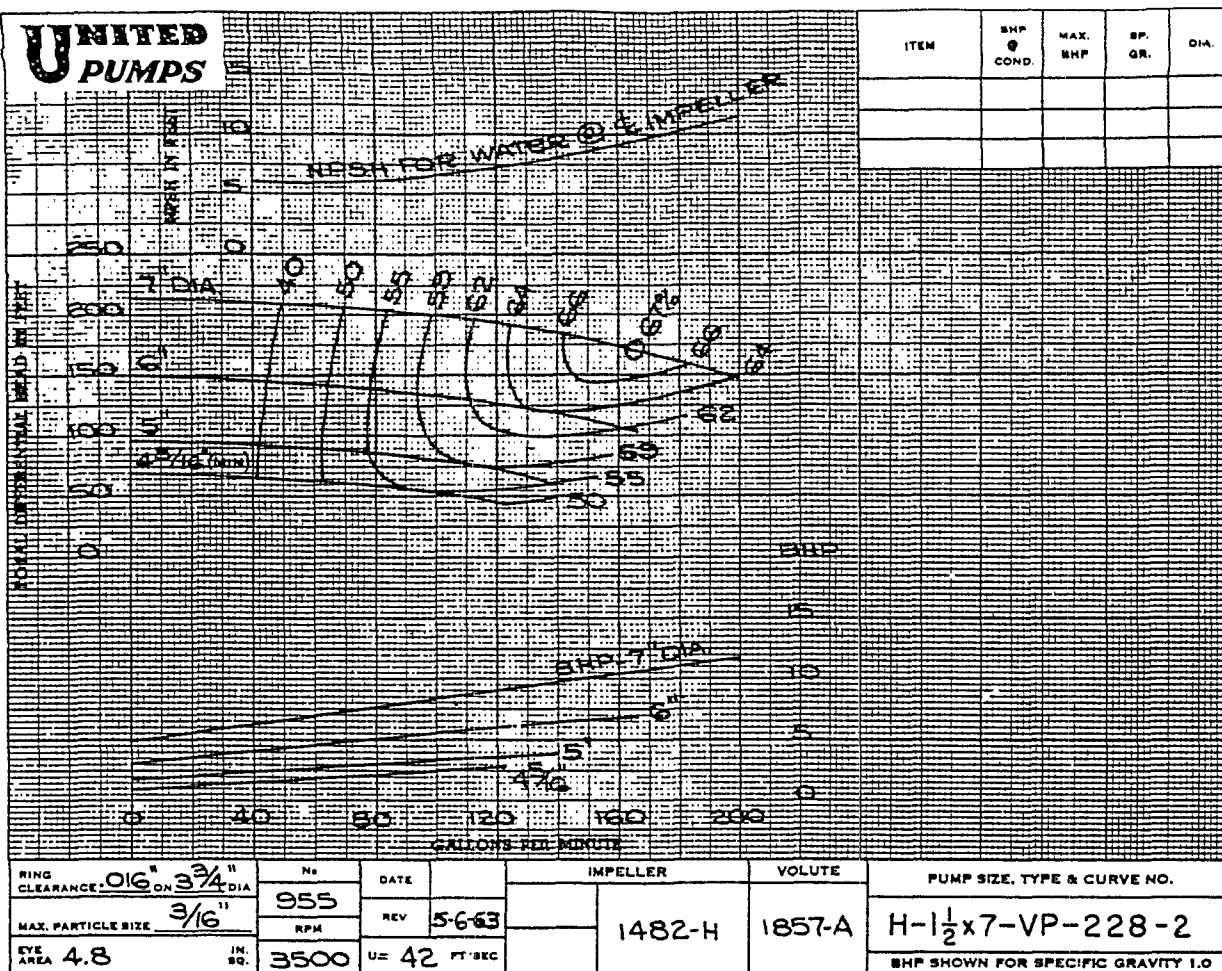


UNITED PUMPS

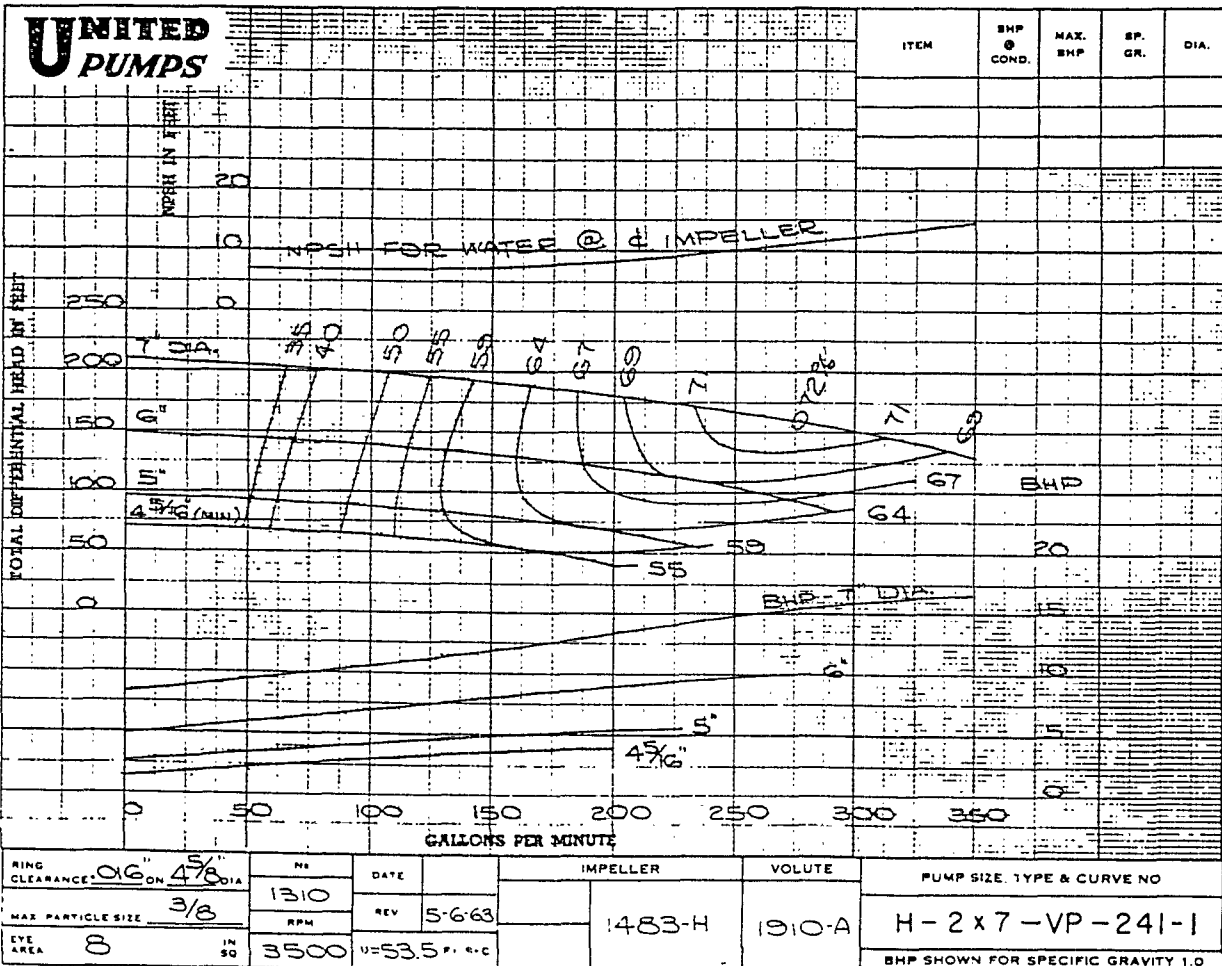




UNITED PUMPS



UNITED PUMPS



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