



TRUOTM

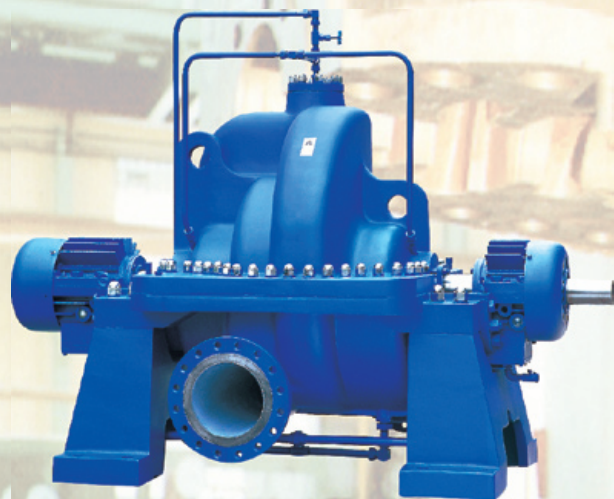


multiflow

Multistage Heavy Duty Axially



Multistage Heavy Duty Axially Split Casing Centrifugal Pump



APPLICATIONS

- Crude oil both in and off shore
- In pipelines
- Process plants
- Refineries
- Terminals
- Sewage water with oil and solid
- Boiler feed (Hot water pump)
- General water supply
- Sea water and hydrocarbons
- R.O system

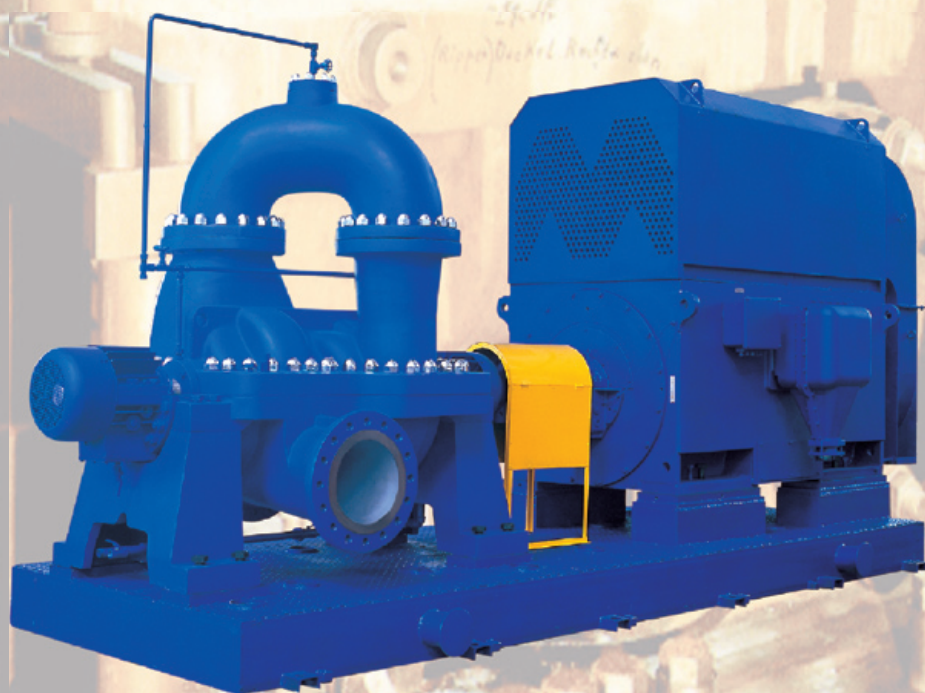
DESCRIPTION

Horizontal axially **split casing**, double volute multistage design. Impellers arranged in opposed groups, KSY is a double suction two stages pump for bigger capacity. KDY is a multistage single suction impeller pump for higher head, first stage double suction impeller design for low NPSH required.

Removable wear rings protect the casing and impeller. The impellers are statically and dynamically balanced. The pump comply with the API 610 specification latest edition in all technical details. Special antifriction bearings on both sides or sleeve bearings with ring or forced-feed lubrication (axial bearing as segmental thrust bearing).

PERFORMANCE RANGE

Capacity	Up to 6000m ³ /h Up to 26400gpm
Heads	Up to 1000m Up to 32810 feet
Temperatures	Up to 200°C Up to 380°F
Speed	2900/1450/980 rpm 3500/1750/1180 rpm



PRIMARY FEATURES

Back-to-back impellers

Min axial thrust and eliminate the need for full pressure breakdown devices is balance drums and disks. Sudden changes of thrust frequently associated with surge on boiler feed pumps are readily accommodated.

Axially split casing

Allows top half casing removal and eliminated the need for additional space requirements to withdraw internals. It also permits immediate inspection of wear surfaces.

Volute design

Gives high efficiency over a wide operation range and greater flexibility if performance variation is required. After dynamic blance the rotor does not need to be dismantled and re-built for pump assembly.

High temperatures design

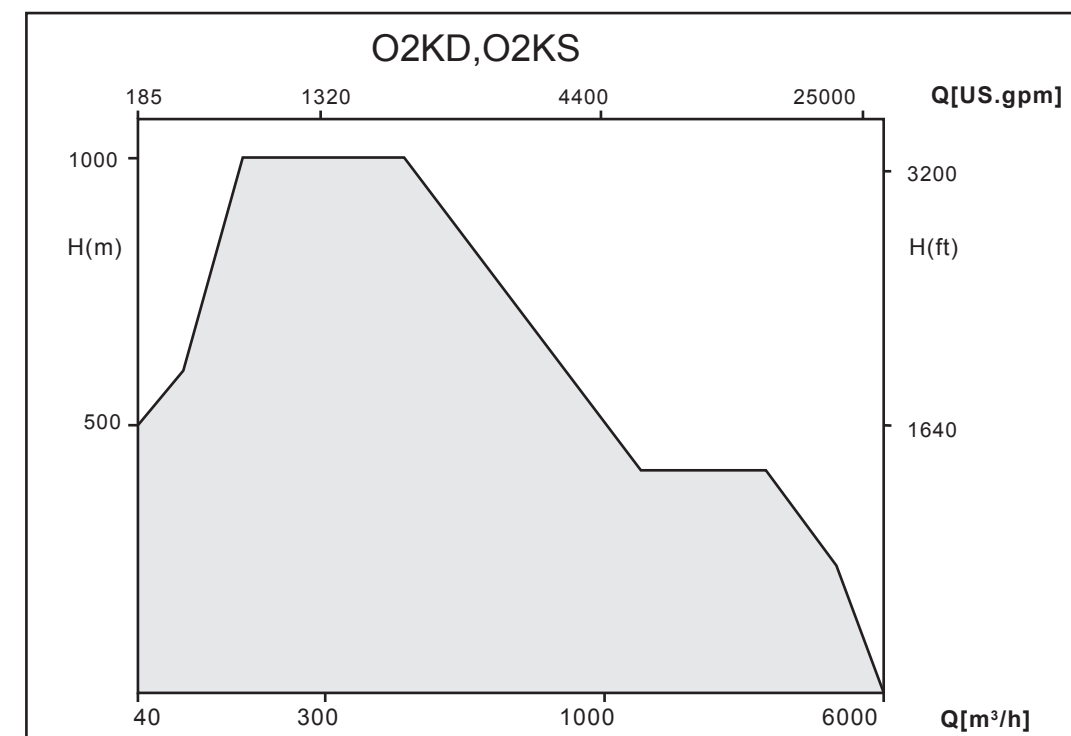
The practically symmetrical execution of the upper and lower casing halves and a near centerline support ensures continuous and satisfactory operation even at high temperatures.

Simple construction

No special tools or cradles are required for assembly or disassembly. Heavy duty bolting permits operation at high pressure.

Wear rings design

Removable wear rings protect the casing and the impellers. The case wear rings are press fitted against a shoulder and fixed in place with dowels to prevent rotation or axial movement.



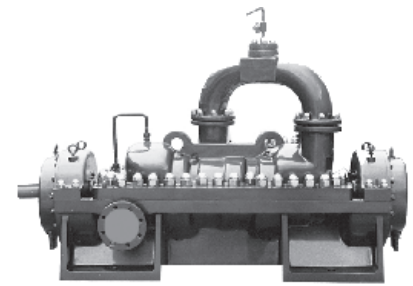
Amplly dimensioned pump shaft

The large diameter of the pump shaft ensures the durability of the mechanical seals, bearings, case wear rings and impeller wear rings. The shaft deflection in the area of the mechanical seals is less than the values stipulated by API. The pump shaft is stepped for easy dismantling.

Reliable shaft sealing

Both stuffing boxes are suitable for the reception of all kinds of mechanical seals. The mechanical seals on both shaft ends are only under low pressure. On the axial bearing side a neck bush and a balance pipe takes care bush and a balance reduction between the intermediate pump pressure and a lower pressure dependent upon the connection point of the balance pipe. In special cases the pump can be operated without a balance pipe.

Full compliance with latest API610



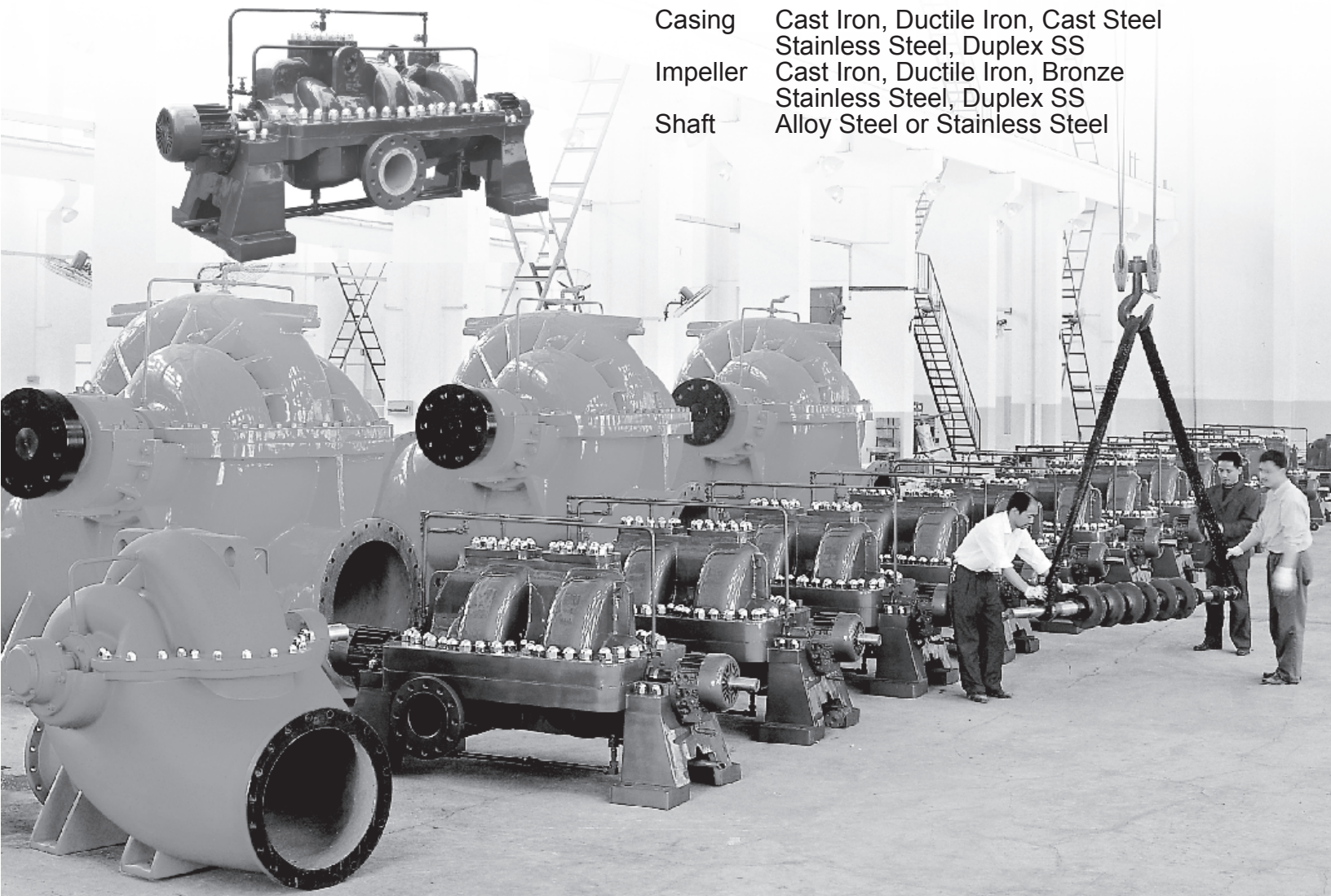
OPTIONS

- sleeve / ball bearings
- bearing housing cowl and cooling fan
- double mechanical seals
- bearing cooling
- heavy duty base-plate

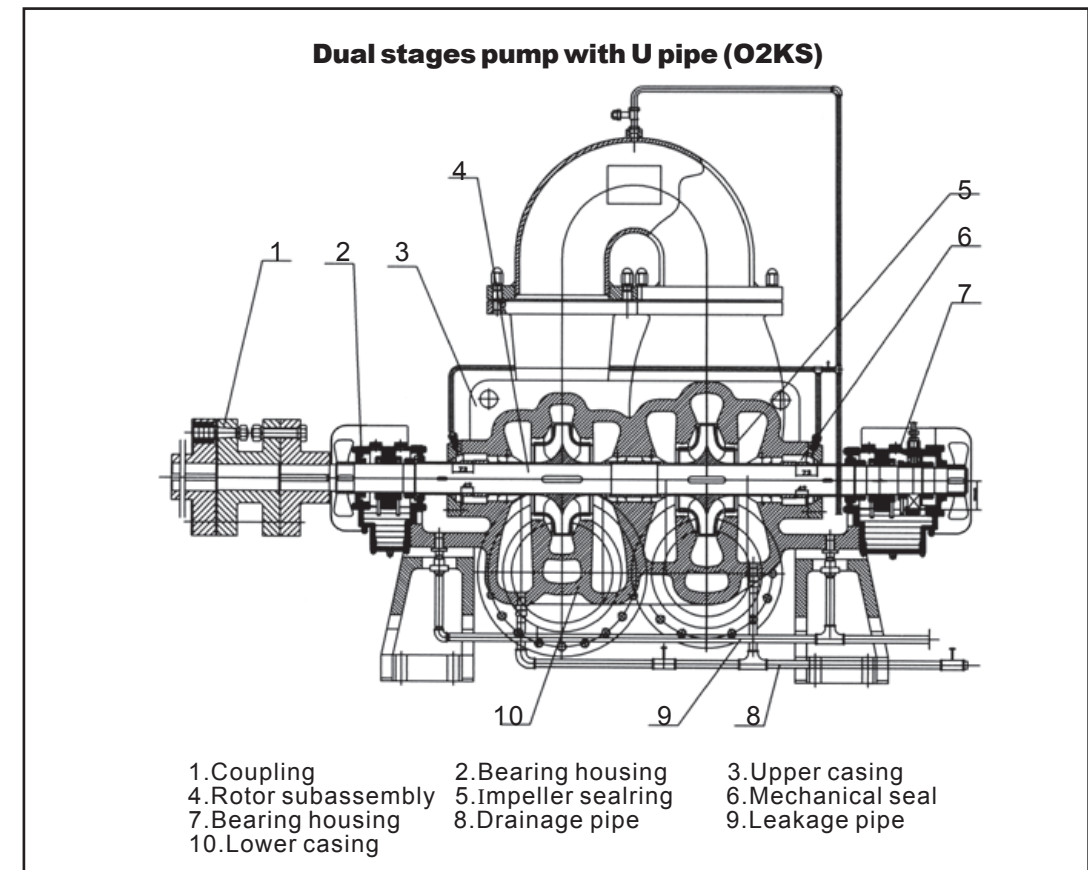
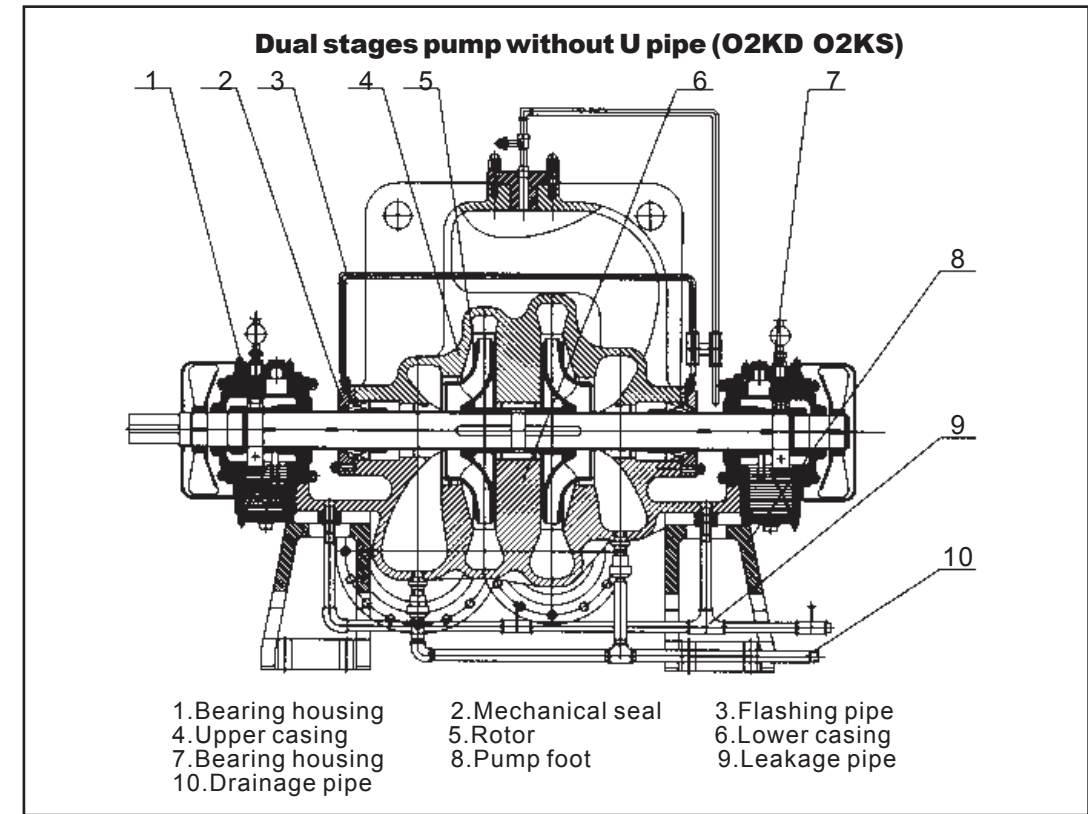
MATERIALS

API610 Eighth Edition, August, 1995

- | | |
|----------|---|
| Casing | Cast Iron, Ductile Iron, Cast Steel
Stainless Steel, Duplex SS |
| Impeller | Cast Iron, Ductile Iron, Bronze
Stainless Steel, Duplex SS |
| Shaft | Alloy Steel or Stainless Steel |

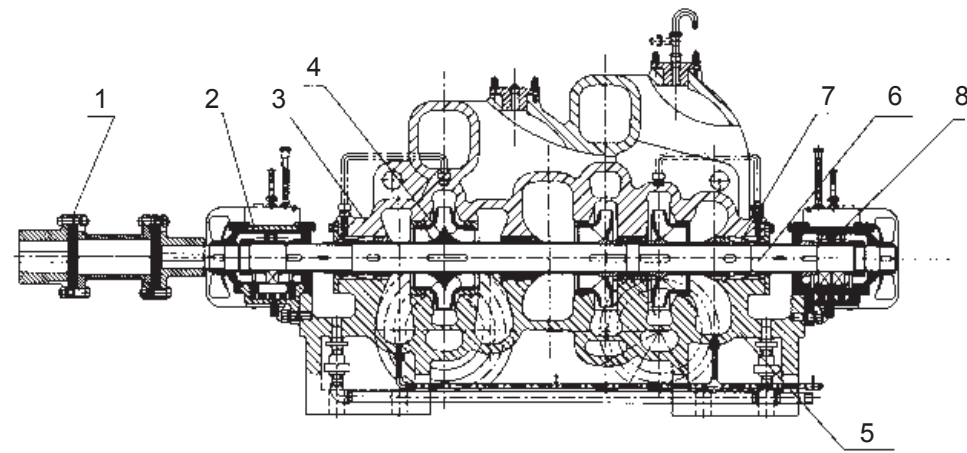


Cross Sectional Drawings



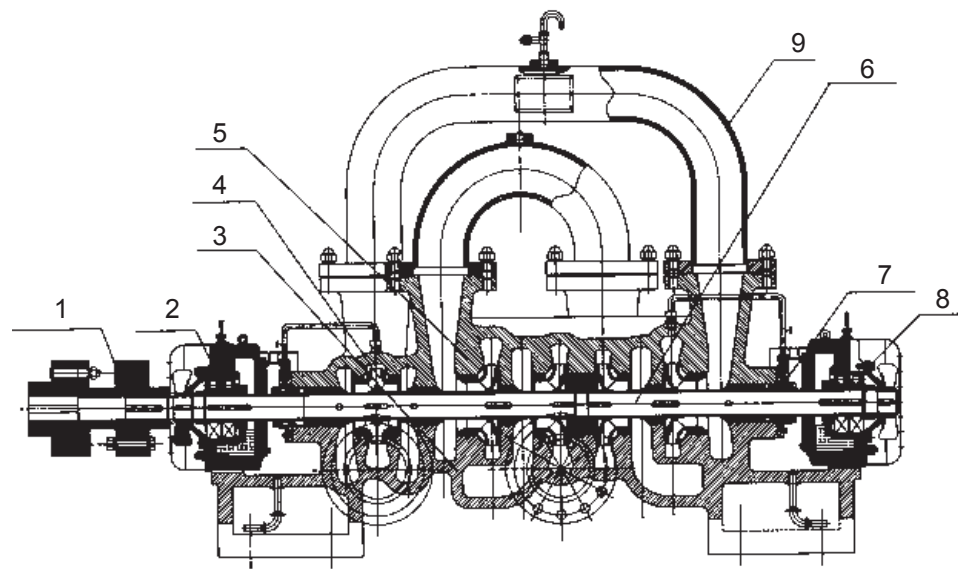
Cross Sectional Drawings

Singular stages pump without U pipe

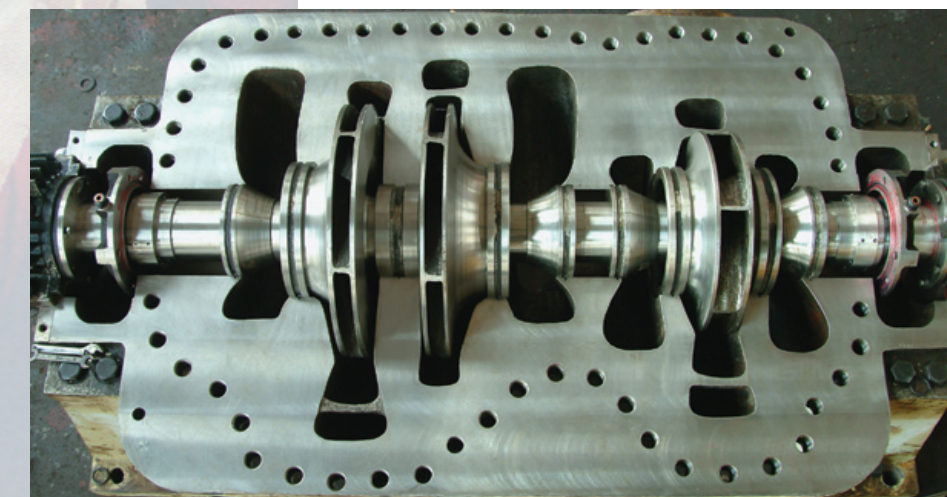
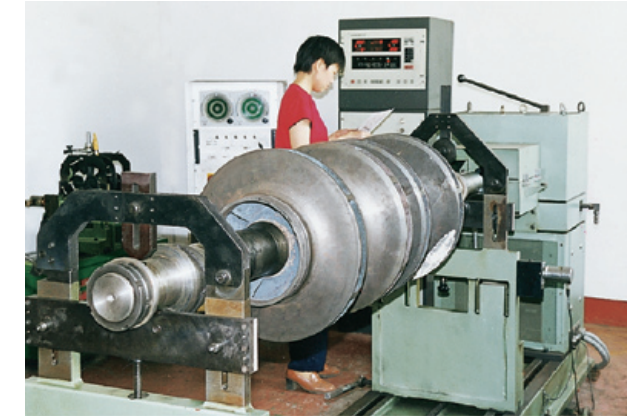


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|--------------------|--------------------|-----------------|
| 1. Coupling | 2. Bearing housing | 3. Upper casing |
| 4. Impeller | 5. Lower casing | 6. Rotor |
| 7. Mechanical seal | 8. Bearing | |

Singular stages pump with U pipe



- | | | |
|--------------------|--------------------|-----------------|
| 1. Coupling | 2. Bearing housing | 3. Lower casing |
| 4. Impeller | 5. Upper casing | 6. Rotor |
| 7. Mechanical seal | 8. Bearing | 9. U-pipe |





TRU₂O™

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