



Sealmatic Successfully Installs Double Mechanical Seal Type CTX-DN In An Axial Flow Pump At Copper Plant

The copper industry is a major contributor to the global economy, copper is more than just a mined metal. Copper extraction refers to the methods employed to obtain copper from its ores. The conversion of copper consists of a series of physical and electrochemical processes. An axial flow pump employed in a copper industry is the type of centrifugal pump that employs an impeller with vanes that direct the flow axially. In general, axial flow pumps creates less pressure (head) than radial flow centrifugal pumps, but they can produce much higher flow rates.

Sealing technology for such robust application have to meet challenges in various respects; risk of insufficient lubrication and dry running, media with a diversity of physical properties, high and low temperature ranges and the handling of hazardous substances and all other conditions which need to be controlled with an absolute reliability.

Operating Parameters of Cartridge Double Mechanical Seal Installed in A Copper Plant								
Sr No	Seal Type	RPM	API Plan	Temperature (°C)	Media	Suction Pressure (kg/cm ²)	Vapor Pressure (kg/cm ²)	Discharge Pressure (kg/cm ²)
1	91-CTX-DN/125-G911	1450	54	111 – 115°C	Brine + 28% NaCl, Ca2SO4, Na2SO4	1 kg/cm ²	1.03 kg/cm ²	5.5 kg/cm ²

As per the operating parameters mentioned above, Sealmatic is pleased to announce that it has successfully installed a double cartridge mechanical seal type CTX-DN in an axial flow pump in a copper plant. The cartridge type CTX-DN seal of Sealmatic, ensures rugged design for long operating life and also reduces down-time. Moreover, it also ensures absolute reliability by providing the benefit of integrated pumping device which increases the efficiency in circulation. Sealmatic has proven itself with its heavy-duty mechanical seals with innovative and tailor-made seal components with high-strength seal faces, guaranteeing longer service life even in highly stressed pumps.

Performance Capabilities

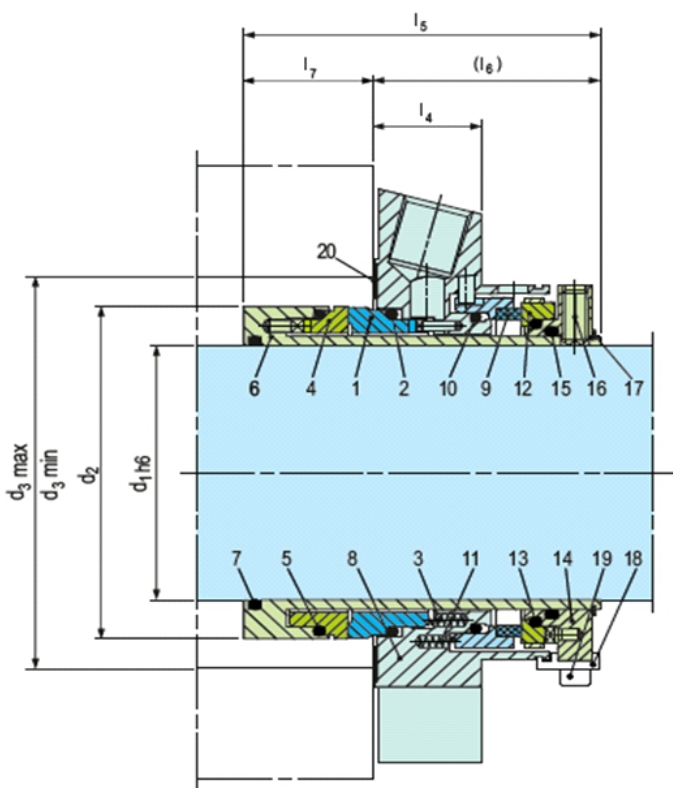
- Sizes: d1 = Upto 100 mm (Upto 4.000")
- Temperature: t= -40 °C ... +220 °C (-40 °F ... +428 °F)

Sliding face material combination BQ1

- Pressure: p1 = 25 bar (363 PSI)
- Speed = 16 m/s (52 ft/s)

Sliding face material combination Q1Q1 or U2Q1

- Pressure: p1 = 20 bar (290 PSI)
- Speed = 10 m/s (33 ft/s)
- Barrier fluid circulation system:
- p3max = 25 bar (363 PSI)
- Δp (p3 - p1) ideal = 2 ... 3 bar (29 ... 44 PSI),
- 7 bar (102 PSI) for barrier media with poor lubricating properties)
- Pump startup:
- Δp (p3 - p1) max = 25 bar (363 PSI) allowed
- Recommended supply medium: max. ISO VG 5
- Permissible axial movement: ± 1.0 mm,
- d1 > 75 mm ± 1.5 mm



September 10th 2021

