

SIX TIMES LONGER LIFETIME FOR FILTER PRESS APPLICATIONS

The ORBINOX HB (Ser. 54) high-pressure slurry knife gate valve with Ni-Hard wear rings multiplies valve service life by 6 times.

Jindal Saw Ltd. Was experiencing severe wear in tailings slurry handling applications, limiting valve service life to approximately 5,000 - 7,000 cycles.

ORBINOX addressed the challenge with the HB (Ser. 54) slurry shear knife gate valve with Ni-Hard wear rings to enhance abrasion resistance.

The solution delivered outstanding results, exceeding 44,000 operating cycles without any maintenance intervention needed. This represents over six times service life compared to previous valves, reducing significantly maintenance stops and costs.

Application

- Iron concentrate filter press feeding line

Challenge

- > 7,000 cycles
- Abrasive media
- High solids percentage

Solution

- HB (Ser.54) slurry shear knife gate valve with Ni-Hard wear ring

Outcome

- Optimal performance after 44,000 cycles
- Significant reduction in erosion at the gate-body interface
- Increased valve durability to over 5 months

After more than 5 months into operation, the ORBINOX HB (Ser. 54) valves continue to operate optimally, with no maintenance needed.

Working conditions

Media: tailings slurry
 Pressure: 16 - 20 Bar
 Temperature: 20 - 40 °C
 % Solids: 40 %
 Solids size: fine

ORBINOX proposal

HB (Ser. 54) for slurry with Ni-Hard wear ring
 Size: DN300
 Body: ductil iron
 Gate: Duplex 2205 hard chromium plated (HCP)
 Rings: alloy cast iron (Ni-Hard) to 300-350 HBN
 Actuator: pneumatic cylinder
 Solenoid valves: normally 1/2" and 3/4"

