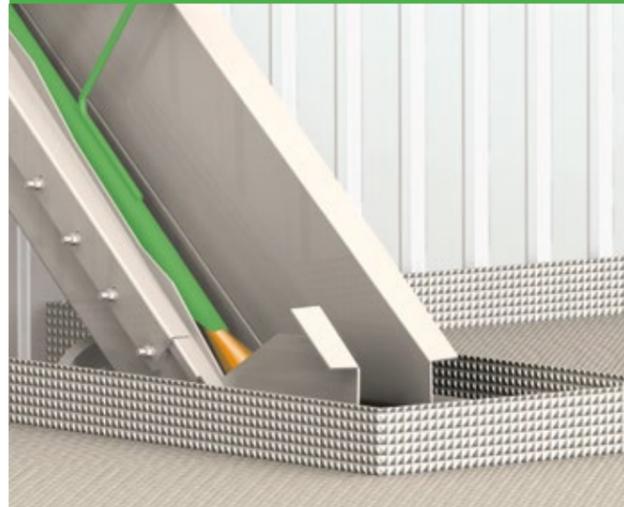


Valmet carries out
over 50 Smelt-X
projects every year.

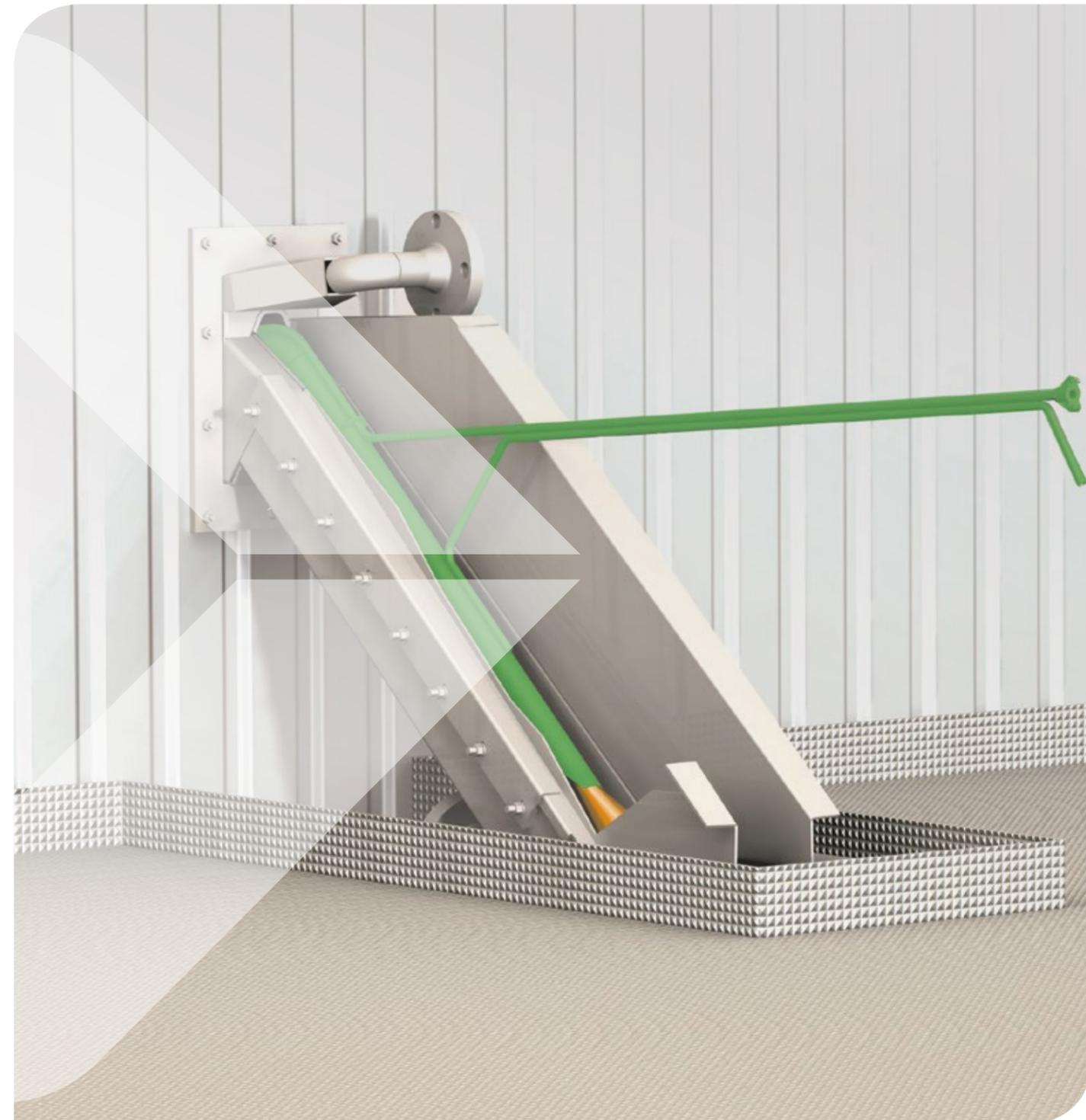


Nearly 200 Smelt-X projects
have been carried out in pulp
mills in Europe, North and
South America, Asia, Africa
and Australia.



Smelt-X

The smartest way to empty
chemical recovery boilers



Shorten Pulp Mill Outage Time by Smelt-X

When a recovery boiler is shut down, smelt bed may remain hot and molten for a long time. If water washing in boiler bank or superheaters begins too soon, water may become in contact with molten smelt and an explosion may occur. This is avoided by waiting so long that it is certain that the whole bed is frozen. However, bed cooling takes in most cases longer than boiler depressurization and economizer washing hence delaying boiler bank, superheater and floor washing. These delays can be eliminated by Valmet's Smelt-X service.



Eldorado mill in Brazil operating the world largest recovery boiler with 6800 tDS/day capacity uses Smelt-X frequently to minimize outage time.

Reduce the time needed even by 30 hours

In Smelt-X service smelt is extracted from the furnace during load reduction. As a result, the remnants of the smelt bed cool typically in 4–6 hours, i.e. while the boiler is depressurized. Consequently, water washing in boiler bank and superheaters can begin as soon as economizer washing is completed (or boiler bank can be washed simultaneously with the economisers),

and no time is wasted. This can reduce the time needed for boiler washing by 10–30 hours, and in many cases also the total outage time for the whole mill can be reduced by the same amount.

Gentle washing service called Wash-X

Valmet has developed also a washing service titled Wash-X, in which the floor is washed simultaneously with the rest of the boiler using low pressure water sprays and mixing devices installed on the furnace floor. As the need for mechanical cleaning and high pressure washing is significantly reduced or removed totally, also the risk that floor tubes are damaged during cleaning is lowered.



This is how it works – Smelt-X operation

Smelt is extracted using air-operated ejectors. These ejectors have the following unique features:

- Ejectors can be designed to fit any boiler, no modifications in the hoods are needed
- Ejectors remove smelt directly into dissolving tank without exposing spouts to high smelt flow.
- Air used in ejectors disperses smelt into small droplets eliminating explosions in the dissolving tank.
- Consequently, Smelt-X can be carried out safely also in the middle of the operation cycle so that operation can continue safely with the same spouts.

In Smelt-X smelt is pumped directly into dissolving tank so that spouts are not exposed to high smelt flow. Pressurized air used in the ejector shatters smelt flow efficiently.

This is what you get – benefits of Smelt-X

- Smelt bed cooling time can be reduced to 4 – 6 hours from 15 – 35 hours. As a result, time spent in recovery boiler washing can be reduced by 10 – 30 hours.
- With Smelt-X alkaline chemicals in smelt bed are collected resulting in savings both in makeup and waste water neutralisation chemicals. Chemical savings can be as high as 700 € for each m³ of smelt recovered.
- If recovery boiler floor needs to be cleaned, even more time savings are available, as Smelt-X can remove as much as 80 – 90 % of smelt bed while the boiler is still in operation.
- With Wash-X, floor cleaning can be carried out while the rest of the boiler is being washed, so floor washing no longer extends the time needed for boiler washing. The risk of mechanical damages caused by cleaning is minimized.

Smelt extraction with Smelt-X and floor washing with Wash-X results in clean floor.



Are you interested in finding out how much **Smelt-X** and **Wash-X** can save outage time in your mill? Contact local Valmet sales representative and he/she will find it out for you!