

Project Value	\$2m
Man hours	5822h
Duration	24 days
Incidents	0
MTIs	0

Nyrstar Hobart HGP 6A/6B Rebuild

June - July 2017

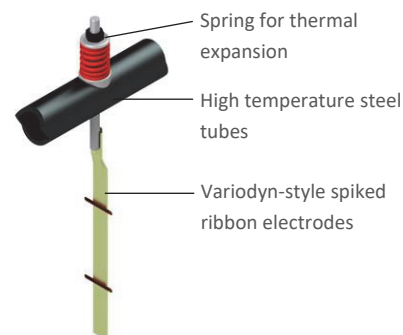
Project Brief

Precipitator Technologies (PrecipTech) completed the rebuild of two electrostatic precipitators (HGP 6A and 6B) at Nyrstar's Hobart Zinc Smelter over a 24 day period in June/July 2017. The complex project was completed with an excellent safety record after almost 6000 man hours. The project was completed on time and ahead of budget (\$2 million).

Project Scope

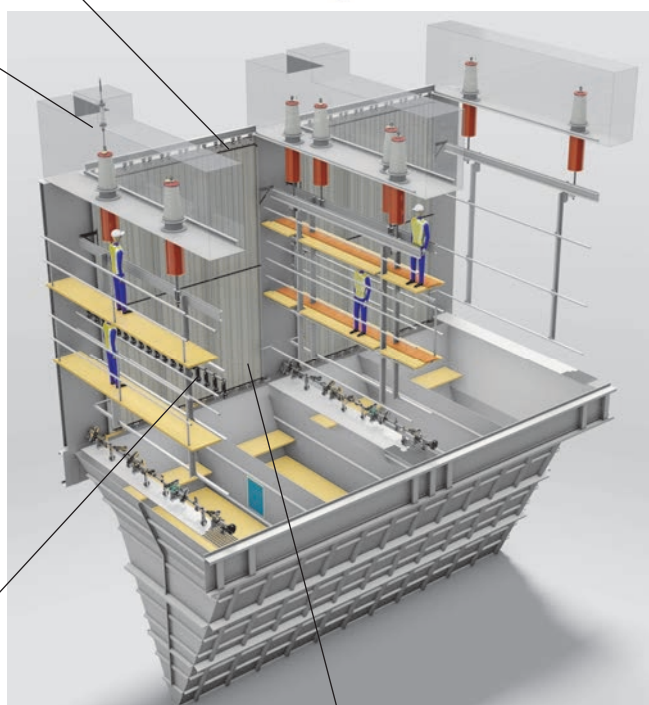
New Upgraded Discharge Electrodes and Frames

36 new discharge frames were installed to replace the old damaged versions. As part of this, a new innovative discharge electrode design was used to provide greater electrical properties and superior performance at the extreme operating temperatures (400°C).



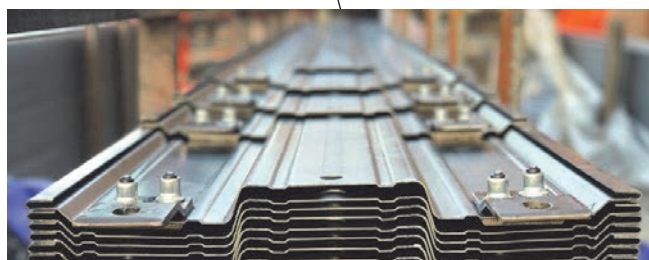
Universal Joints

An improvement was made to the discharge electrode rapping system by adding PrecipTech universal joints. These joints allow the shaft to flex without losing strength. This system has been shown to prevent insulator failures in this area.



Upgraded Rapping Systems

New rapper shafts and hammers were installed with a new huck-bolted design to improve reliability and reduce maintenance costs.



New Collecting plates

342 new collecting plates were installed to replace the old damaged plates.

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The Electrostatic Precipitator Specialists

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General Maintenance

In addition to the upgrade work a large amount of general maintenance work was also completed. This included thorough internal washing and extensive casing repairs. Additionally, there were repairs made to other rapping systems and internal components.



Lime Wash

The internal areas were washed using a lime based solution to allow for high quality repairs to be completed.



Extensive Casing repairs

Due to the acidic nature of the gas stream there was a large amount of casing repair required for these units.



Project Outcomes

Prior to the rebuild the precipitator was in a very poor state of repair with both rear fields not operational due to internal damage. After the rebuild the power levels have increased dramatically to maximum levels of over 36 kVA. This has had a very large impact on collection efficiency and has directly reduced the dust carry over to the acid plant. Additionally, all of the new systems installed have greatly improved the reliability of the precipitator which has increased the availability of the unit and reduced maintenance costs.

"The most professional and well organised crew that I have come across" - Electrical Engineer, Nyrstar

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