VIVA ENERGY – GORE BAY PIPELINE MECHANICAL REPAIR 2022

Case Study

AuSteel Projects

Building the Future

## **AuSteel Projects**

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# A Case Study on an Oil & Gas Project

### **The Fabrication Process**

The Gore Bay pipeline is a 12" seamless API 5L grade B pipeline that carries white petroleum products and has a length of 17.27 Km, and a maximum allowable operating pressure of 6900 kPa.

The need for mechanical repairs led to the development of the Gore Bay pipeline mechanical repair scope of work. AuSteel Projects planned the project, supplied necessary materials, developed ITPs, and work procedures from mobilization to site fabrication of the pipe strings and the final shutdown and cut in of five new sections encompassing 10 golden tie-in welds.



#### Construction

AuSteel Projects commenced the VIVA pipeline project in April 2022. The project work involved pre-works including, welder qualifications to AS 2885.2, pipe stringing, fitting, welding, 100% NDT, hydrotesting, blasting, coating, pipe string placement, hand digging excavation, cut out of existing lines, clamshell machine weld prepping, golden welds, and coating repairs for mechanical repairs of the Gore Bay pipeline encompassing 96 meters of DN 300 pipe separated into 5 sections of 48m, 22m, 12m, 9m and 2m.

There were 10 Tie-in Golden Welds completed during the pipeline shutdown scheduled for Mid-July 2022. To successfully manage the project and to mitigate the risks/injuries to personnel working on-site, every day before commencing work, the Austeel Projects team conducted Daily Prestart Meetings, Gas Testing, Barrier Thinking, and followed the guidelines according to the SWMS and VIVA Hot Work Permit.



#### **Enabling Resilience Through Disruption**

Viva supplies approximately 40% of NSW's fuel requirements and the Clyde Terminal is one of a few key fuel supply operations within NSW. The Clyde Terminal receives finished petroleum products including gasoline, diesel, and jet fuel via a connecting pipeline from the Gore Bay Terminal at Greenwich, which is the Company's ship unloading facility. Once the finished petroleum products are received at the Clyde Terminal, they are stored, tested, and blended to ensure the products meet the required specifications and are fit for their intended use.

Meanwhile, there was an oil tanker scheduled to dock at the VIVA Gore Bay terminal & waiting for the line to be cleared to unload the fuel after 4 days of the VIVA plant shutdown (the time provided to AuSteel Projects to cut the existing line, weld new pipe spools, and perform NDT on the welds to use the line for transferring fuel to supply to NSW).

Despite the various contentions about it, AuSteel Projects did not just finish the installation in 4 days, but also did it with zero defect rate as per the NDT requirements.



## **Roll Out**

MPI bevel of existing pipe after the cutout was carried out followed by the NDT of golden welds, which included

- Visual Inspection
- Magnetic Particle Inspection
- Radiographic Inspection
- Ultrasonic Inspection Phased Array

There were ZERO defects detected and all welds complied with the acceptance standard AS2885.2 Tier 1.

At the completion of all stages of the project, the MDR was provided by the AuSteel Projects engineers including the signed ITP's and the necessary certification.



#### The Bottom Line

AuSteel Projects was able to achieve the project targets on time as per the planned schedule, additionally, from the health and safety aspect, our dedicated team performed with no health and safety issues on site. This has increased our clients' confidence level for selecting AuSteel Projects for completing the project safely and on-schedule.



Convenient supply chain management and field engineering support were delivered from our head office in Brisbane. From this strategic location, we provided rapid response and immediate deployment of products, technical and human resources upon client's request for flawless project execution.