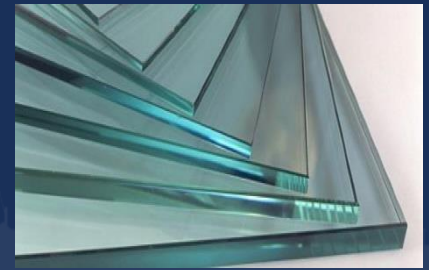


Client Reference

Manufacturing | Glass Improvement of Asset Care Plan



Client Background

The Client is the leading manufacturer and supplier of float glass, laminated glass and mirrors in Southern Africa. The factory is situated on the outskirts of Johannesburg and produces approx. 250 000 tons of high-quality float glass per year. All the products are supplied to various customers both locally and internationally through a well-established distribution network and infrastructure with warehouses at strategic locations.

With the current challenges posed by the local economy, a renewed focus is put on a reduction in costs and higher production efficiencies to improve product output.

With this in mind, the Pragma Asset Care Centre on site is critical to assist the client in analysing, identifying and eliminating asset defects that have a high impact on production downtime.

The improved Asset Care Plan ensures adequate inspection and maintenance of critical components. Keeping the critical spares on site also significantly reduces downtime. Downtime already reduced by 50% in the first quarter of 2020. AC Manager

Key Challenges

- The failure of specific glass handling equipment is directly responsible for full production downtime on the laminates line.
- Downtime on the particular equipment has increased over time.
- Gaps in the spares management strategy.
- Contractor specific maintenance plans are not optimal.
- Identified components that caused the downtime can pose a safety risk if it fails unexpectedly, especially while the equipment is in the process of handling glass.

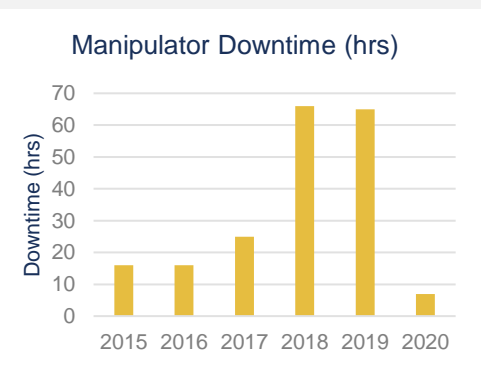


Value Add

- The improved Asset Care Plan ensures adequate inspection and maintenance of critical components.
- Keeping critical spares on-site ensures quick availability which reduces downtime significantly.
- Intervention already reduced downtime by 50% in the first quarter of 2020.

Pragma Intervention

- The on-site Asset Care Centre (ACC) facilitated a detailed root cause analysis (RCA) on the crane manipulators after identifying numerous failures that caused significant downtime (average of 5 hours per month).
- The ACC involved the client's technical experts and the maintenance and service contractor in the DMAIC process to perform the RCA.
- After correlating the failures with maintenance and service, they identified history gaps in the Asset Care Plan (ACP) for the equipment and found:
 - Critical components were not inspected or maintained frequently, leading to unexpected failures.
 - Unavailability of spares on site also contributed to increased downtime of failures.
- Critical inspections and maintenance interventions were added to the ACP. They also procured the required spares and stored them on-site to be readily available.



Tools and Technology

- DMAIC tool
- SAP
- Excel