

Case Study

Efficiency through Improved Automation

Automation of D'end - Crown to Petal joint by SAW

Location - Hazira

The Process

We work continuously to better our performance by conserving energy, improving process efficiency and developing cost effective strategies to attain our sustainability targets. Our Automation of D'end - Crown to Petal joint by SAW, process involves welding of Crown to Petal joint of pressure vessel D'end by SAW process in the place of conventionally used manual SMAW process.

This has helped us increase quality, productivity and cost efficiency. After mechanical adjustments to the existent process, smooth movements of SAW machine were attained. Welding parameters were optimized to get the desired bead size and finish to minimize the chances of weld defects.

The Objective

1. To achieve stable circular motion of SAW machine.
2. To gain ellipsoidal crown surface for machine movement .
3. To attain welding parameter optimization for defect free weld.

The Benefits

1. Increase in productivity by 8 times (182 Welder Man-days saved)
2. Improvement in quality by 99.28 %.
3. Achievement of NDT Acceptance. (MFF target is ≥ 98.25 %)
4. Better weld finish leading to time savings in weld dressing for final inspection

The Impact

Total cost savings - 4,17,200 INR.
(Consumable + Manpower + Electricity)