



BRIDLE ROLL IN CRM

CASE STUDY FOR THERMAL SPRAYING

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OVERVIEW

Plasma Spray Processors (PSP), an ISO 9001 certified company specializes in plasma and thermal spray coating services. With over 40 years of experience, PSP has established itself as a leader in providing advanced coating solutions.

This case study focuses on PSP's application of tungsten carbide coating for bridle roll for a metal strip manufacturer, highlighting significant improvements in performance and efficiency.

PROBLEM

A metal strip manufacturer faced significant challenges with their hard chrome plated bridle rolls, which wore out after producing 350,000 metric tons of metal strips.

This wear and tear caused several critical issues:

- Production halted causing costly and disruptive downtime.
- Frequent interruptions in the manufacturing process, lowering overall production rates.
- Increased maintenance expenses strained the company's resources.
- Worn rolls compromised metal strip quality, leading to potential defects and reduced product quality.

SOLUTION

Implementation

- Replaced hard chrome plating with tungsten carbide coating on bridle rolls.
- Through a stringent Procedure of masking, inspection, spraying and quality check coating was done.
- Increased Production Output From **350,000** to **850,000 metric tons** per roll.
- Improved Roll Lifespan: Over **140%** increase.

Key Benefits

- Extended operational life of bridle rolls.
- Improved production efficiency.
- Reduced maintenance costs.
- Enhanced overall product quality.

The customer plans to convert all remaining hard chrome plated rolls to tungsten carbide coating.

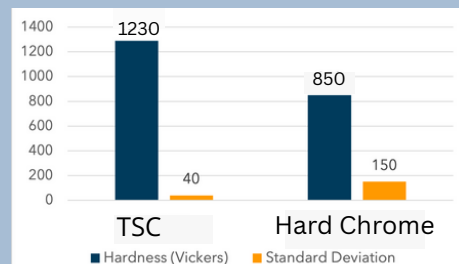
AT A GLANCE CHALLENGES

- Premature roll wear after **350,000** metric tons
- High downtime and frequent roll replacements

BENEFITS

- Extended roll life by over **140%**
- Increased production from 350,000 to **850,000** metric tons per roll
- Notable reduction in maintenance costs

AT PLASMA SPRAY PROCESSORS OUR MOTTO IS "CUSTOMER SATISFACTION IS OUR SATISFACTION"



"The high durability and operational efficiency of tungsten carbide coating over traditional hard chrome plating is scientifically evidenced by its ability to withstand higher levels of wear and provide extended operational lifespan"