

CORROSION RESISTANT LAYER ON CARBON STEEL

Carbon steel is often protected from rust and corrosion by using special coatings. However, these coatings can be expensive, harmful to the environment, and need frequent upkeep.

At OMIC R&D, we've developed a new method to protect steel by covering it with a layer of corrosion-resistant material. This new method is not only affordable but also proven to resist corrosion effectively. We tested this by using advanced techniques, including electrochemical testing and salt spray chamber tests, on various materials like Ni-625, 308L stainless steel, NiCu7 alloys, and A572 steel.

This new method helps manufacturers produce parts and machine components that last longer and resist corrosion better, all while being more environmentally friendly.



Fig. 1 - ESS Process showing multiple passes on full-scale plate. Slag is shown peeling from metal.

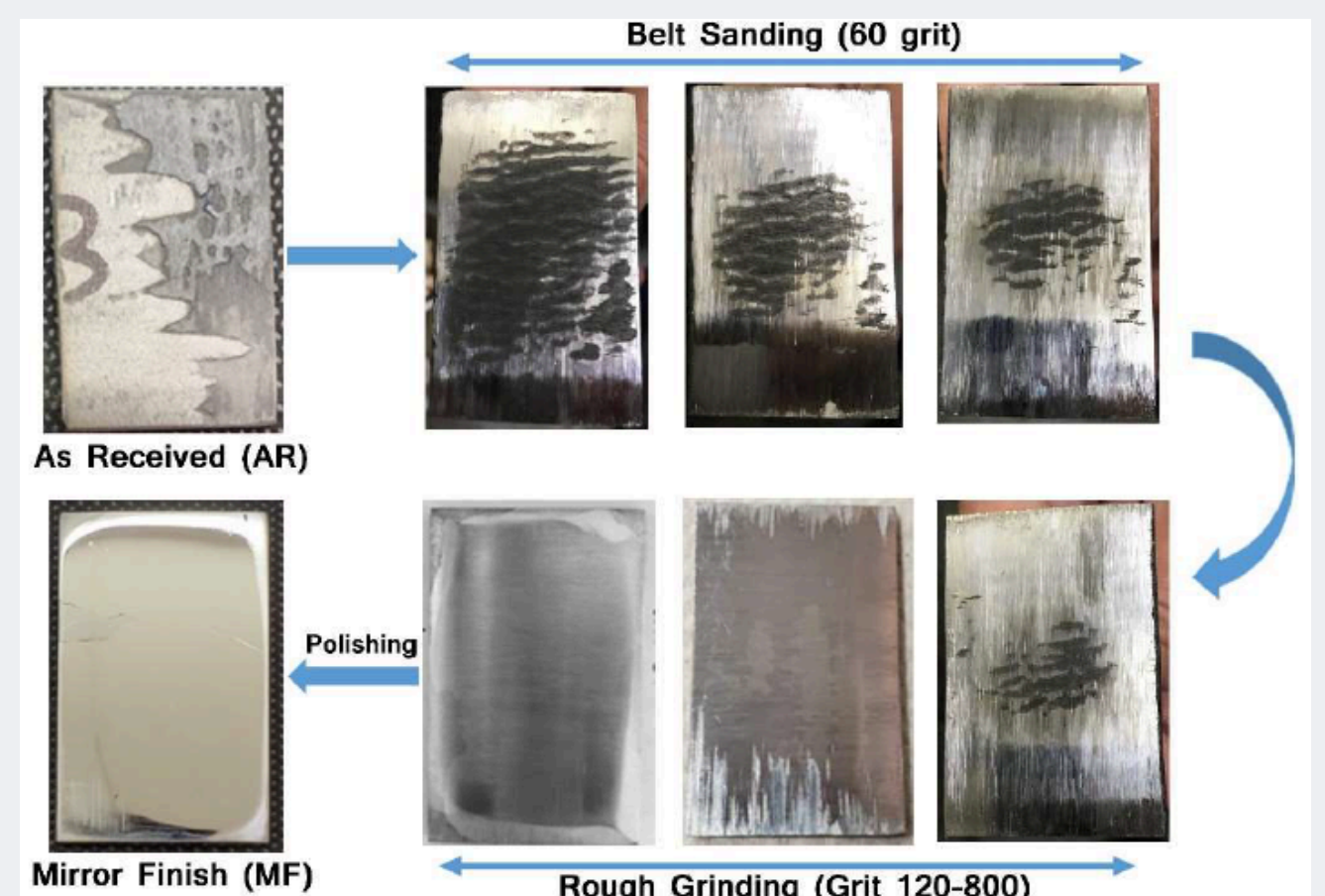


Fig. 2 - Sample preparation procedure

Research for this project was conducted by Dr. Graham Tewksbury of Oregon State University.

Industry participants include:
OREGON TOOL
VIGOR
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