

Suction Roll Repair



Metal Surgery Milwaukee LTD.

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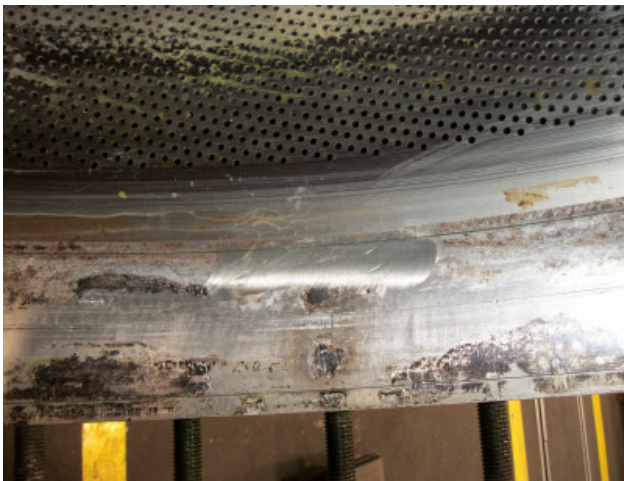
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Metal Surgery was called when this suction roll was found to have two cracks on the inner diameter. Being a special alloy, a special welding wire was ordered for this repair in addition to using a pulse welder and a cooper heat machine to monitor temperatures.

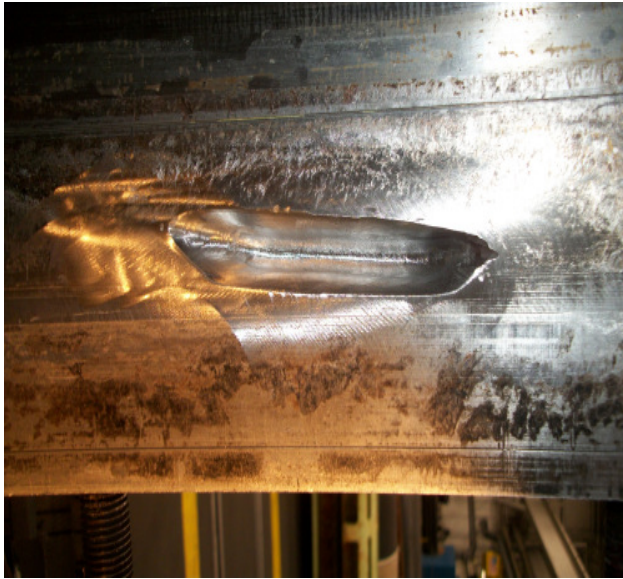
On the right you can see extra precautions were taken to not contaminate the coating with grinding dust and metal shavings.

Below illustrates the two cracks found. These areas were prepolished prior to Metal Surgery arriving.



After all areas were protected surrounding the two cracks, the cracks were then excavated. The dye penetration test was repeated many times to make sure the crack was completely excavated.

Areas being completely excavated the roll was then prepared for welding. Surrounding areas were taped and blankets placed over the tape to protect the roll's coating from the heat.



The cooper heat machine to the right was used to monitor temperature to make sure the part was not getting to hot. Many times welding was stopped to let the temperature cool down. This was important for two reasons. The special coating on the roll could only stand up to a certain temperature as well as the procedure and material. Getting to hot will cause many problems in this material which can't be fixed.



On the right illustration is welding almost complete on one crack. Hand held pyrometers were also used to watch the temperature.

Below is the welding complete and the weld being ground down for final hand finishing.



Below illustrates hand finishing complete and the roll ready for production once again.

