



UTP PRODUCTS AND SOLUTION COMPETENCE CONVINCE ONCE AGAIN

voestalpine Bohler Welding India Pvt. Ltd. does everything in its power to satisfy customers: The following is about a very special task, where the experts used all their knowledge and bundled solution expertise to ultimately turn it into an outstanding success story.

Viraj Profile is one of the world's largest manufacturers of stainless steel flanges with one of the largest forging facilities. The forge includes #10 hammers (1.6 T to 16.0 T capacity) and #2 presses with a capacity of up to 4000 T

THE CHALLENGE

On the 4000 tonne forging press, a challenge occurred when one of the pinions broke and became wedged in the gear assembly where it damaged another 13 teeth of the 3.9 m diameter gear. Of the total 137 teeth, 13 were completely damaged and 17 partially damaged. This damage was a severe blow to production with a good order backlog from Europe.

Replacing the gear of the 13.8 t press would have cost €110,000 and taken 7-8 months. The production loss for this press was about 20 to 25t/day.

SOLUTION COMPETENCE

The goal was to complete this task economically and within 30 days. The „Viraj Forging“ team for mechanical maintenance and the colleagues in production had to be convinced with the best solution.

FILLER METALS FOR REPAIR WELDING

- » **UTP 068 HH/ UTP 7015**
(Consumed quantity = 110 kg).
- » **UTP 65 D**
(consumed quantity = 190 kg)
- » **UTP N 890 AS**
(Consumed quantity = 90 kg)

The SMAW method was used for controlled heat input. A balanced ratio of 3.2 mm and 4.0 mm electrodes was used for good fusion with the base material and productivity.

PRODUCT FEATURES

UTP 068 HH can be used for repair welding on difficult to form steels such as heat treatable steels or tool steels. In addition, mixed joints of austenitic and ferritic materials can be welded at elevated operating temperatures. The weld metal of UTP 068 HH / UTP 7015 is hot crack resistant, does not tend to embrittlement and is scale resistant at high temperatures.

UTP 65 D has been developed to meet the highest requirements for joining and surfacing. It is extremely crack resistant when joining difficult-to-weld steels, such as hard manganese steels, tool steels, spring steels, high-speed steels as well as in mixed joints.

The thick coated Anfas stick electrode UTP N 890 AS can be used on all types of steel with ferritic and austenitic microstructure as well as on cast iron, cast steel and all non-ferrous metals. It enables the cutting out of workpieces in a very simple way. UTP N 890 AS is also suitable for removing corroded metal layers and for fusion cutting of metallic materials.

Extensive benefits package leads to customer loyalty. The UTP experts were able to find a cost-effective solution for the repair, and the customer was completely satisfied thanks to the considerable time saving of seven months in the procurement of a new gear. The absolute dimensional accuracy was of course maintained at full operating load. Due to the convincing solution orientation and the satisfaction of the customer, it resulted, according to the feedback of the UTP experts, „that we use about 700 - 1000 kg of M&R products for other various repair works every month“.



Repair of bull gear and pinion teeth for 4000 T press is one of the most challenging application in forging industry. Correct selection of welding products and process only makes it possible to achieve success in operation. Precise placements of beads with UTP 068 HH / 7015 and UTP 65 D and controlling heat input to avoid distortion was the key to success.

Even after repairing 13 teeth of this bull gear and pinion, feels proud to say that it is successfully operating of more than 24 months and still working.

Neeraj Tiwari, Business Development Manager – M&R voestalpine Bohler Welding India Pvt. Ltd.

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Why us? We are a leader in the welding industry with over 100 years of experience, more than 50 subsidiaries and more than 4,000 distribution partners around the world. Our extensive product portfolio and welding expertise combined with our global presence guarantees we are close when you need us. Having a profound understanding of your needs enables us to solve your demanding challenges with Full Welding Solutions - perfectly synchronized and as unique as your company.

