



# SANDVIK G.E.T CASTING WELD-REPAIR PROCEDURE

SHARK™ GROUND ENGAGING TOOLS

## 1. INTRODUCTION

This document establishes the procedural requirements for the weld-repair of Sandvik G.E.T castings that are identified with the defects prior to commencing the fabrication job.

**NOTE:** This procedure is not prepared to repair the defects identified on the weld joint created to attach the G.E.T. casting on to the bucket or the lip.

## 2. CONDITION

This procedure is to be used for cosmetic weld-repair on casting only when the defect is not penetrated more than 30% of the section thickness. It is advised to consult Sandvik Shark if any major structural weld-repair is required.

## 3. PRE HEAT TEMPERATURE

Material	Target Pre-heat Temperature °C	Max Inter-pass temperature °C
Sandvik Q&T Castings/wear steel (350-500HB)	160-190	230

Table 1 Preheat, Inter-pass temperatures.

Refer to Weld Procedure PWP0001 for more details.

## 3. PROCEDURE

Following are the recommended steps that need to be performed in the given order to achieve the desired outcome:

- The defect must be gouged out to expose the sound base metal prior to weld repair. The excavation area shall be of single “U” shape having a minimum sidewall angle of 45°.
- Magnetic Particle Test-1:  
The excavation area must be dressed, and magnetic particle tested to ensure that the defect is completely removed.
- The excavated crater and the surrounding area (75mm radius from center of the excavation crater) of the casting must be preheated first to the **target temperature** (refer to Section 3, Table1) using the propane gas burner before starting the repair. **NOTE:** The Oxy-acetylene torch is not allowed for the pre-heating purpose.
- Welding Electrode:  
Refer to the Tabel-2 of “Section 5: Welding Consumable” given in the PWP0001 procedure. The consumable must be of low hydrogen. If the welding rods are used, the rods must be pre-heated to a temperature as recommended by the manufacturer to minimize the moisture content.



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- The excavated crater is to be filled-up with the weld metal as per the PWP0001 welding procedure.
- The casting must be allowed to cool slowly to room temperature after welding.
- Magnetic Particle Test-2:  
All weld-repaired areas are to be dressed and magnetic particle tested. The weld-repaired area must be free of defects.

## 4. RECORD

The record of the weld-repair job shall be maintained with photographic evidence.

## 5. REVISION HISTORY

Rev	Date	Changes	Revised By	Approved By
0	28.04.2022	Original issue	Rohit Bayal	Chye K Soon
1	12.10.2023	-Added weld temperature table	R.Lauchlan	M.Javadi