



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	225

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	R.B	C.S
1	12.10.2023	Added weld temperature table	R.L	M.J
2	19.12.2024	Updated max interpass temps	R.L	M.J