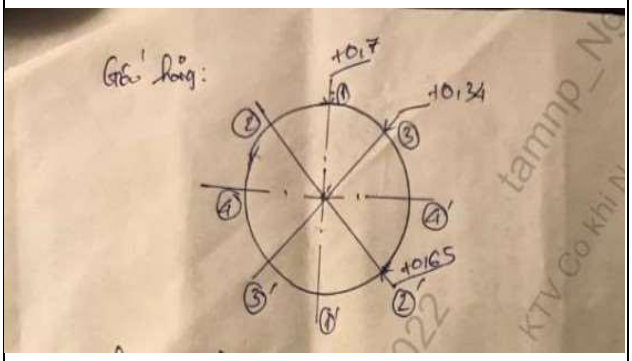
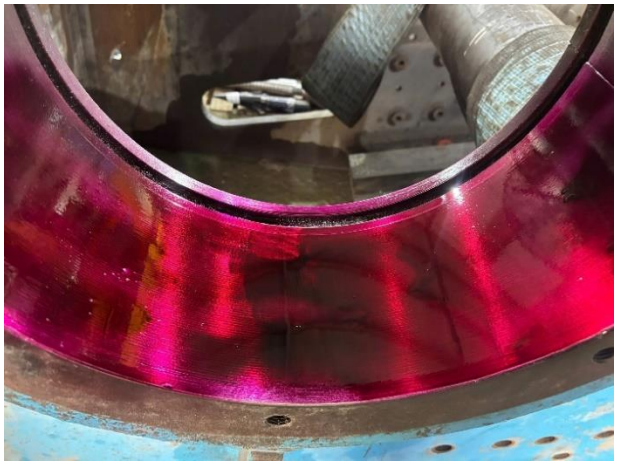
PHUONG DONG TRADING AND INDUSTRY CO., LTD
Add: No. 70, Dan Di St., Uy No, Dong Anh Dist., Hanoi, Vietnam
Whatsapp/zalo: +84 987 822 360 *Web: https://lasercladding.pro*
----------***----------

BEARING HOUSING REPAIR PROCEDURE FOR JAW CRUSHER USING LASER CLADDING TECHNOLOGY
(Carried out by Phuong Dong Trading and Industry Co., Ltd)

No	Working Procedure	Illustrative Images
1	**Receive & Inspect Condition** - The bearing housing for bearing 22336 has experienced excessive wear, resulting in a clearance between the housing and the outer race that exceeds the allowable tolerance (0.7 mm compared to the recommended H7 tolerance of 0mm to 0.057mm). - Perform Penetrant test (PT) to check for cracks or porosity. The area to be repaired must be thoroughly cleaned using appropriate solvents to completely remove any contaminants, rust, surface debris, and existing defects.	 
2	**Preparation before laser cladding:** - Select a suitable laser cladding powder compatible with the base material of the jaw crusher housing: Use powder with low Carbon content (< 0.03%), high Nickel content (10–14%) to improve ductility and bonding, and Chromium content (16–18%) for enhanced wear resistance. - Prior to use, the powder shall be dried in a specialized oven at 250°C for 1 hour.	

	- The bearing housing area shall be preheated to approximately 150°C (depending on the carbon content of the base material) prior to laser cladding, in order to minimize distortion and improve metallurgical bonding during the cladding process.	
3	**Align & Fix the Workpiece** - Mount the jaw crusher housing onto a specialized fixture. - Use a dial indicator to check the concentricity between the bearing housing and the alignment shaft. - Prepare the CNC program and upload it to the control unit.	
4	**Laser Cladding Restoration** - Perform laser cladding on the worn bearing housing areas with an appropriate cladding thickness and a machining allowance. - During the laser cladding process, control the cladding thickness by adjusting the metal powder feed rate, laser power, and the rotation speed of the jig.	

5	**Post-Laser Cladding Inspection:** - Check the bearing hole diameter to ensure it meets the specified dimensions according to the drawing. - Inspect the laser cladding surface for cracks or porosity. If the results are not satisfactory, grinding must be performed, and the laser cladding process needs to be repeated.



6	**Replace the worn-out wall plate + stiffening ribs**	
	Wall plate dimensions: 1380x125x50 =1pcs	Stiffening rib dimensions: 125x356x30 = 3pcs

7	**Re-machining of the bearing hole** The bearing hole is machined on a CNC milling machine with a horizontal rotary head.
	 
8	**Check dimensions according to the drawing** - Tolerance and concentricity of the bearing hole diameter D380 H7 as per the drawing.  

	- Check surface roughness and hardness after machining  
9	**Package the product and hand over**