

Supplementary Information File

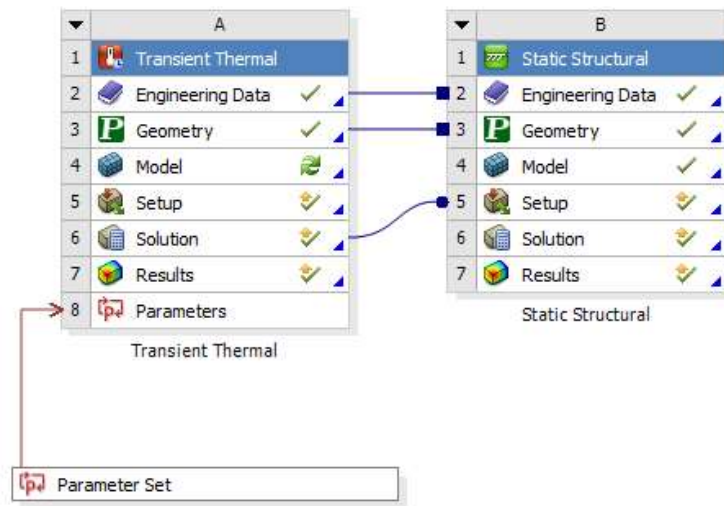


Fig. S1 Coupling Thermal Transient Analysis (FEA_A) with Static Structural Analysis (FEA_B)

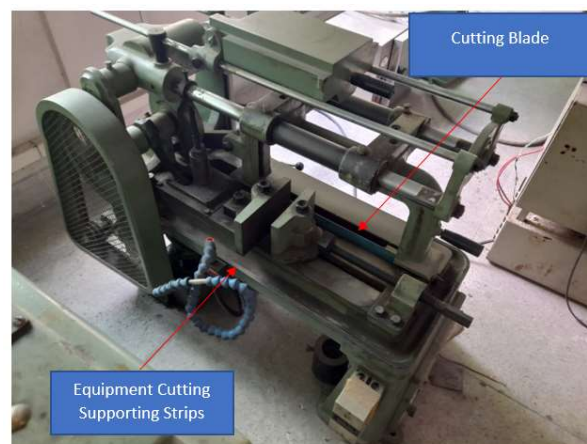


Fig. S2 Electric Saw Equipment for cutting sides of testing strips

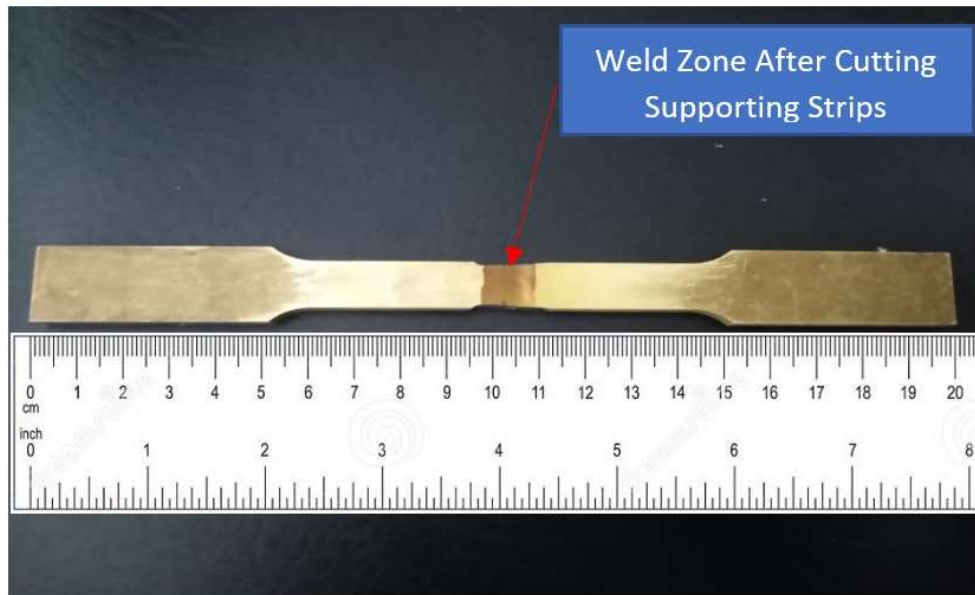


Fig. S3 A sample Cut by Electric Saw Equipment

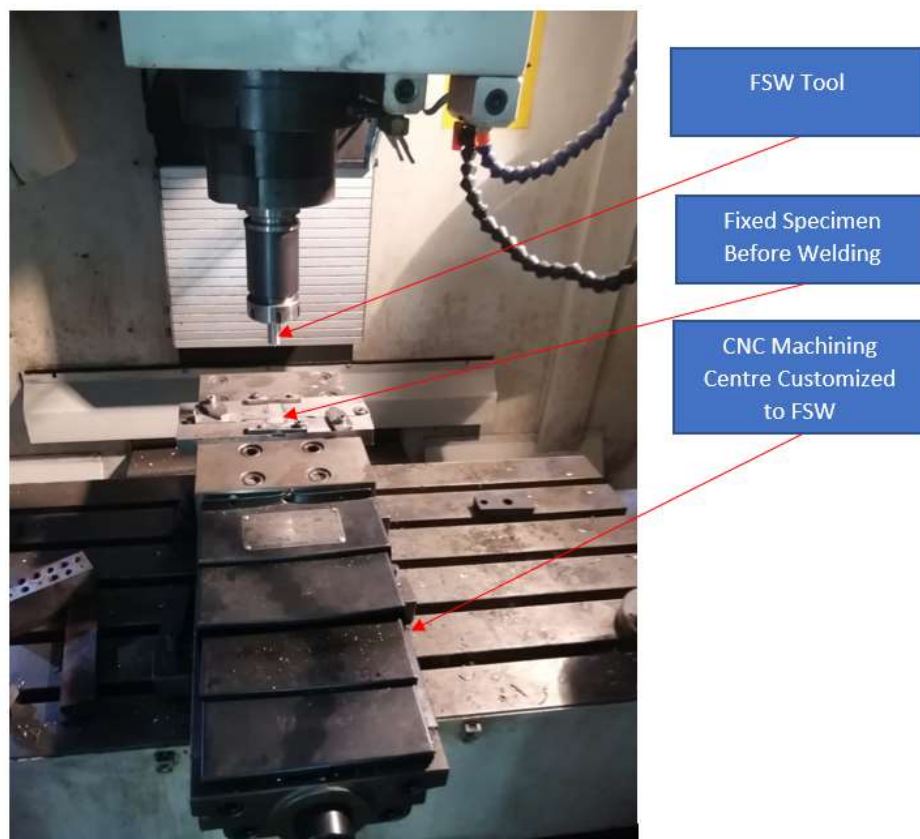


Fig. S4 Customized FSW using CNC Machining Centre



Fig. S5 Thermal Imager

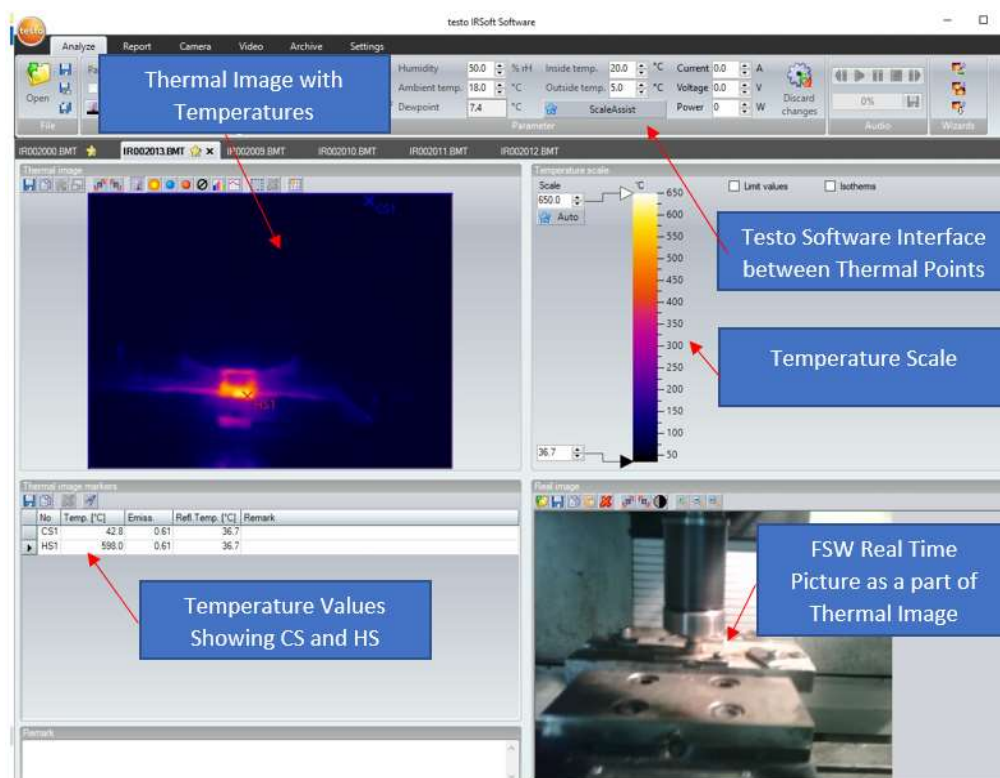


Fig. S6 An example of Thermal Image from Testo 868 Imager

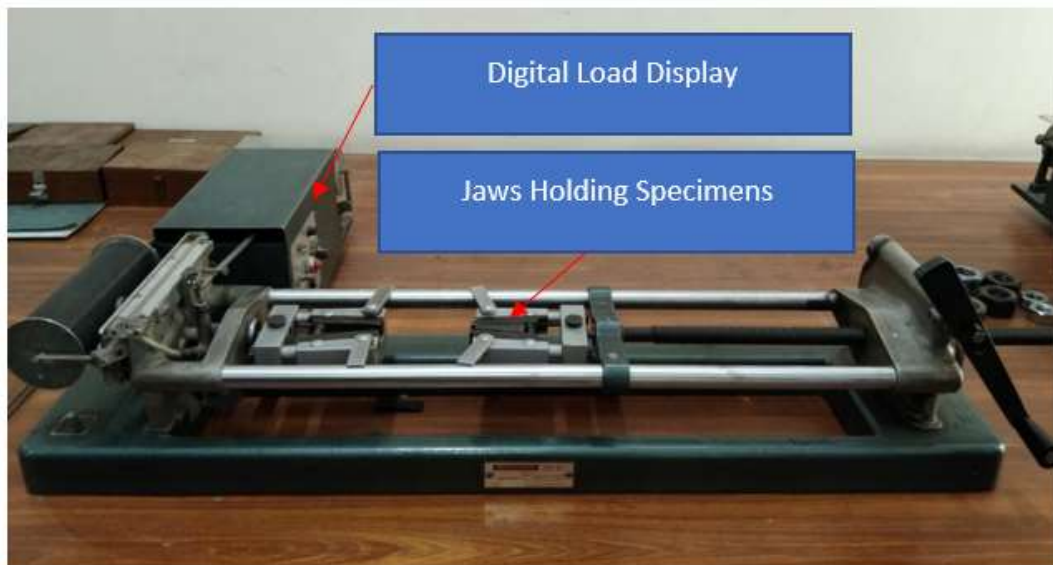


Fig. S7 Hounsfield Tensometer for measuring Friction Stir Weld Strength (FSWS)

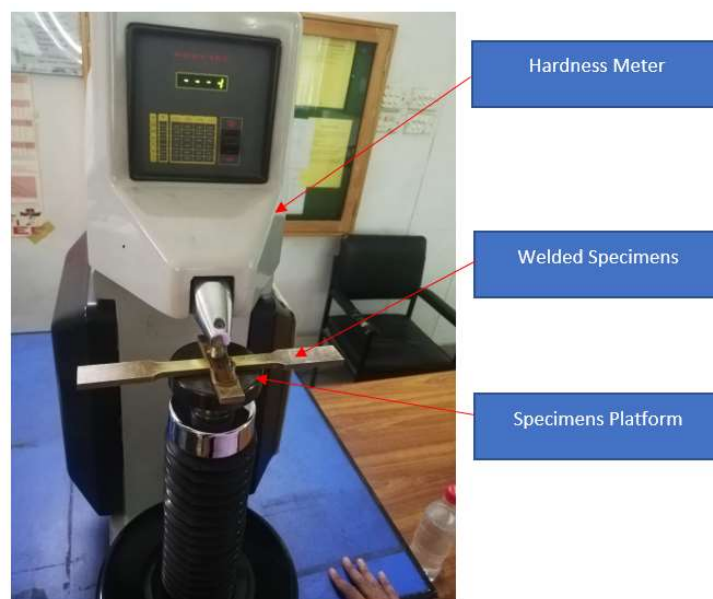


Fig. S8 Rockwell Hardness Tester