

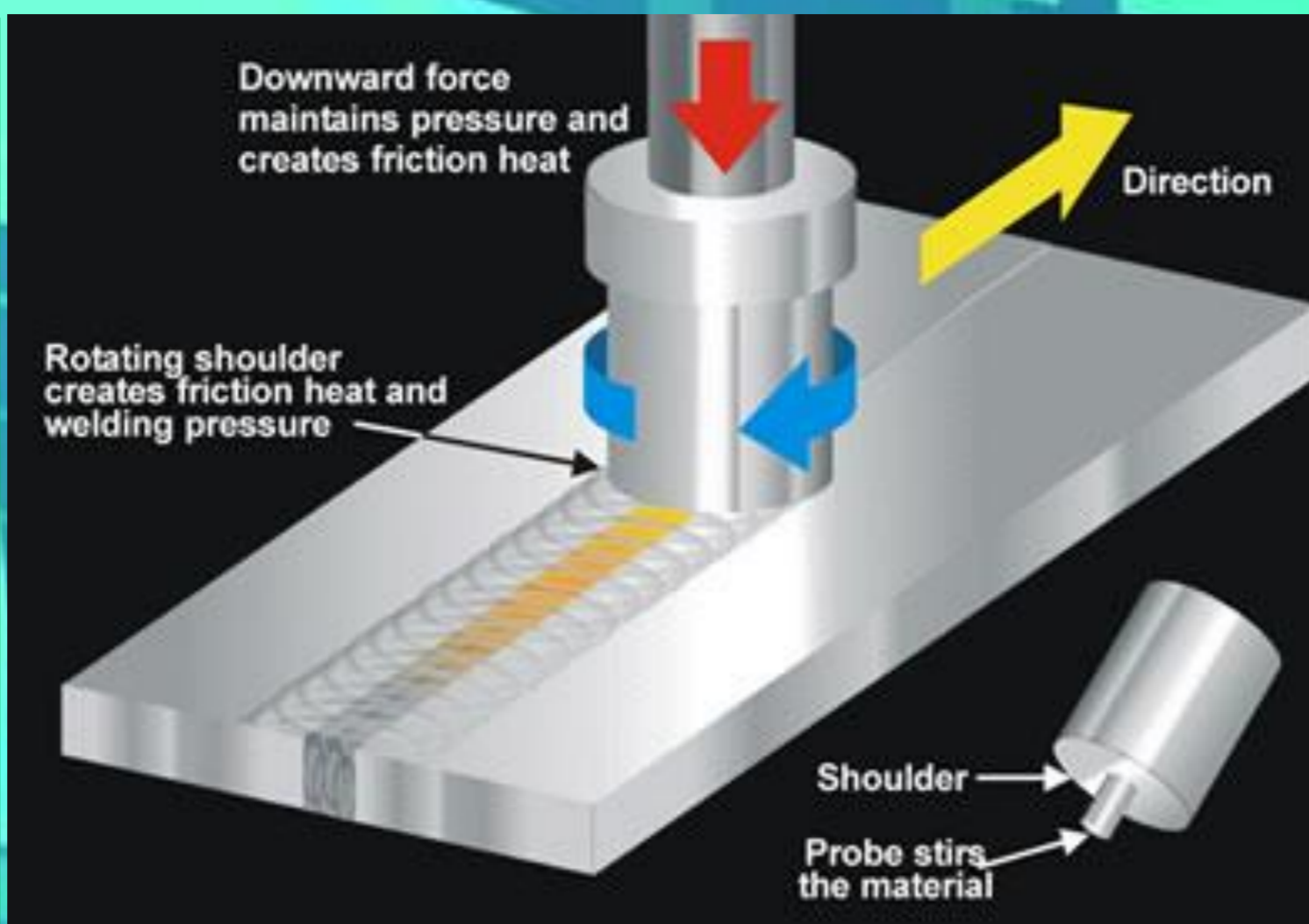
ORBITAL FRICTION STIR WELDING

ITEX'16

12 - 14 MAY 2016

ABSTRACT

- FSW involves frictional heat and mechanical stirring process.
- Proper clamp is vital for friction stir welded pipe butt joint.



OBJECTIVES

- Tightly hold pipes together.
- Rotates pipe at slow speed.
- Easy removal of pipe after welding.

PROBLEM STATEMENT

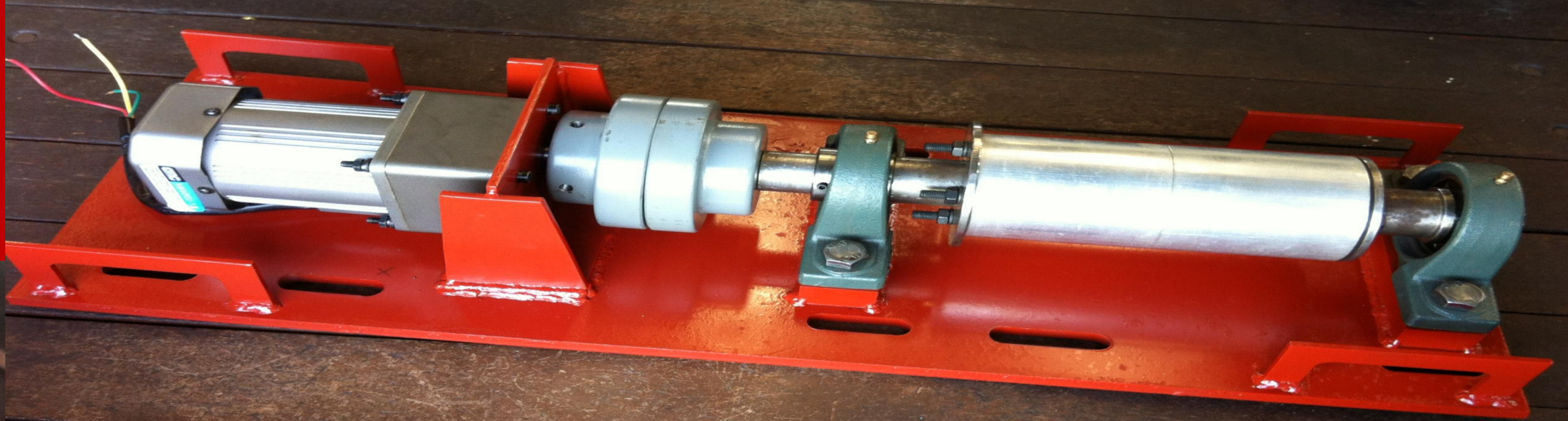
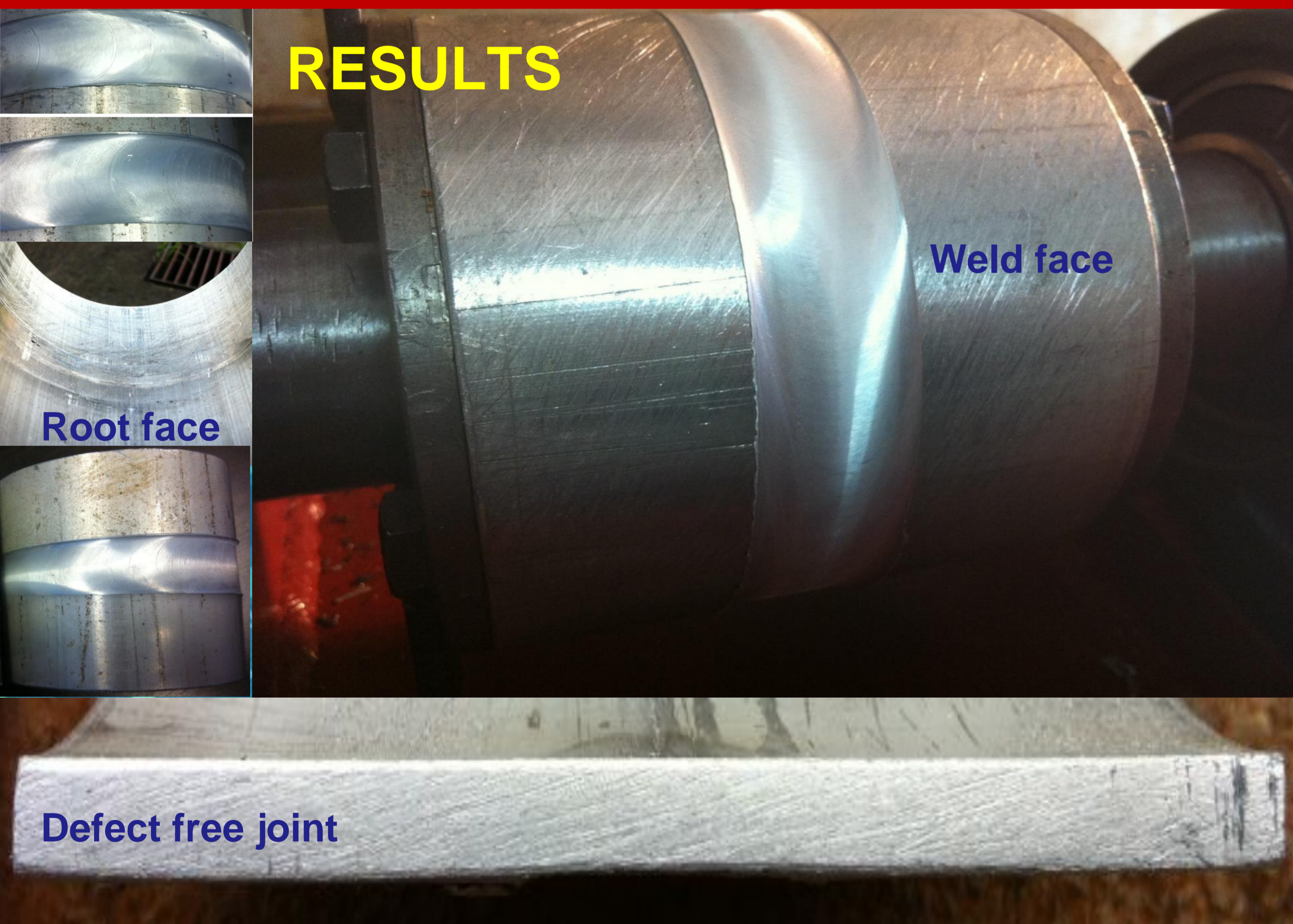
- No proper fixture to run FSW on pipe due to complex shape.
- The existing milling machine is single functional.
- Expensive FSW machine.

USEFULNESS

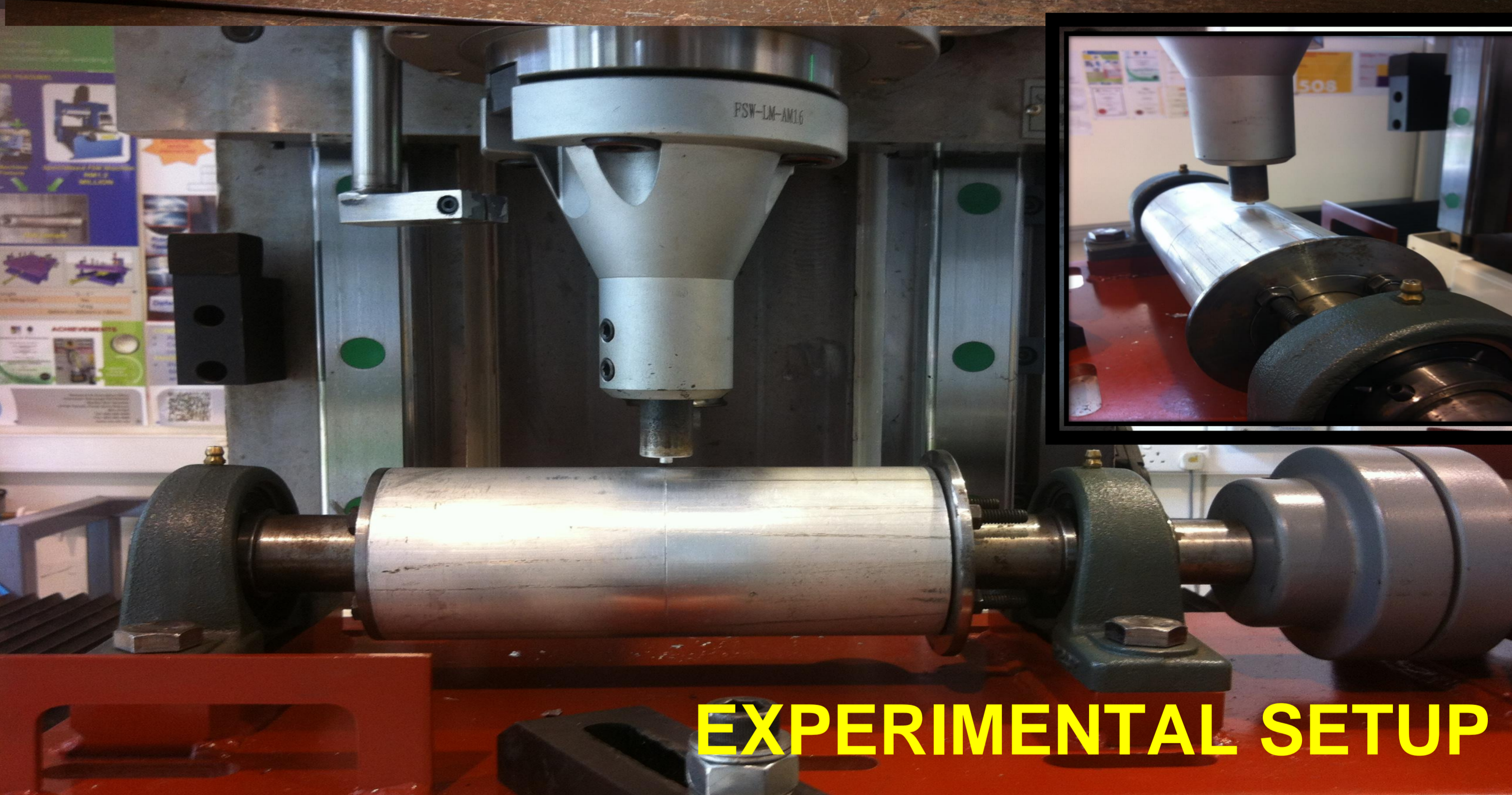
- Enables milling machine to run FSW.
- Cost savings.



RESULTS



INDUSTRIAL DESIGN : MY13-00895-0101



EXPERIMENTAL SETUP

COMMERCIALIZATION POTENTIAL

- Additional device for available milling machine.
- Caters FSW research activity at universities or companies.

BENEFIT TO SOCIETY

- Keeps environment safe as this process requires no filler metal or shielding gas, produce no fumes and arc.

INVENTORS

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NOVELTY

- NEW fixture design for FSW on pipe.
- Technically simple design.
- Affordable product.
- Easy to setup

PUBLICATIONS&GRANTS

- Kindly refer to this link:
https://www.researchgate.net/profile/Azman_Ismail
<http://orcid.org/0000-0001-6857-5423>
- STRG (RM20K), SGPIM (RM50K)

ACHIEVEMENT



Won GOLD Medal

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