

Tandem Rig

Track Control Solutions

Adding Value

A perfect tool for quick, simple and accurate weld inspection – designed for use on any kind of Vignole rail in any industrial environment.



The Pandrol Tandem Rig is a multi-use ultrasonic testing scanner designed to facilitate a wide range of weld inspections on different rail types and in various environmental conditions.

Suitable for both aluminothermic and flash butt welds, the Tandem Rig enables the detection of flaws perpendicular to the rail surface, such as lack of fusion, shrinkage and thermal contraction, across the whole height of the weld.

The tandem method involves using two 45° angle beam probes which are automatically adjusted to move simultaneously in opposite directions. One is operated as transmitter and the other as receiver probe – enabling full coverage of the weld heights and the detection of any linear indication perpendicular to the surface of inspection.

Thanks to the Pandrol design approach, the Tandem Rig produces results with a high degree of sensitivity and reproducibility.

→ TECHNICAL FEATURES

Temperature tolerance

The Tandem Rig can be used for the inspection of both aluminothermic and flash butt welds. Its unique versatility means it can be used on rail temperatures ranging from -10°C to +55°C.

Magnetic security

The Tandem Rig contains four magnets, which fix the device securely during the tandem test, avoiding unwanted movement and producing more reliable results.

Edge adjustment

The Tandem Rig boasts a fully adjustable edge guide to guarantee probes are positioned accurately on the centre line of the rail. This ensures it can be used effectively on rails with different railhead dimensions.

Probe positioning

The position of the probes on the Tandem Rig can be changed simultaneously through simple spanner adjustment:

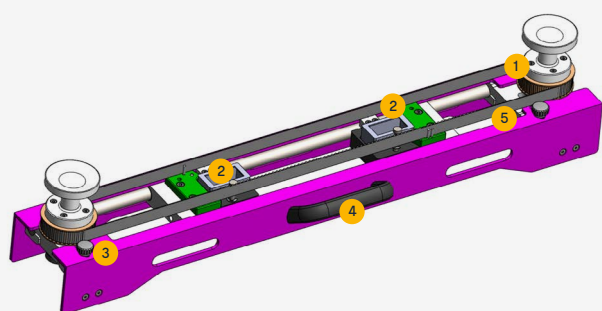
- When the probes are positioned close together in the centre of the rig, the device tests the root of the rail weld.
- When the distance between the probes is increased, the whole height of the weld is scanned.

Knurled screws

The knurled screws can be used to adjust the system width simply and efficiently.

→ ADVANTAGES

- Quick and accurate weld inspection.
- Simple solution for tandem inspection.
- Highly efficient and cost-effective mechanism for ensuring weld integrity
- Reduced long-term maintenance.
- Durable design – highly resistant to climactic changes and demanding conditions.



→ COMPONENTS

1. Spanner adjuster
2. Probe holder
3. Knurled screw
4. Handle
5. Drive belt

→ PROBE SPECIFICATIONS

Probes specifications	
Description	Single-element probe
Purpose	Detection and characterization of weld defects with Tandem Method
Shear waves	2MHz
Refracted angle	45°
Ceramic size	20x22
Superior output connector	Lemo 00

Standard compliance

Supplied with its own certificate in conformity with EN 12668-2

→ TYPE OF DEFECTS DETECTED



Shrinkage



Lack of fusion

Rig Probe



→ LEARN MORE



www.pandrol.com