



OKOndt GROUP

# **USR-01 KIT TESTING OF RAIL WELDED JOINTS**



**Complies with:  
EN14730-1:2006+A1:2010**



USR-01 Set is intended for ultrasonic inspection of aluminothermic welded rail joints in accordance with EN14730-1 requirements. The USR-01 Set can be used for inspection of joints welded by the electrocontact, Al-thermit methods, for secondary rail track inspection based on the results of mechanized and quick systems of ultrasonic testing, as well as for pre-weld inspection of end sections of new and used rails before welding them at rail welding enterprises or in tracks.



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**Sonocon B** offers all the functions necessary to inspect welded rail joints and an easy-to-operate interface.

The flaw detector complies with all quality requirements and provides a wide range of standard and additional inspection functions.

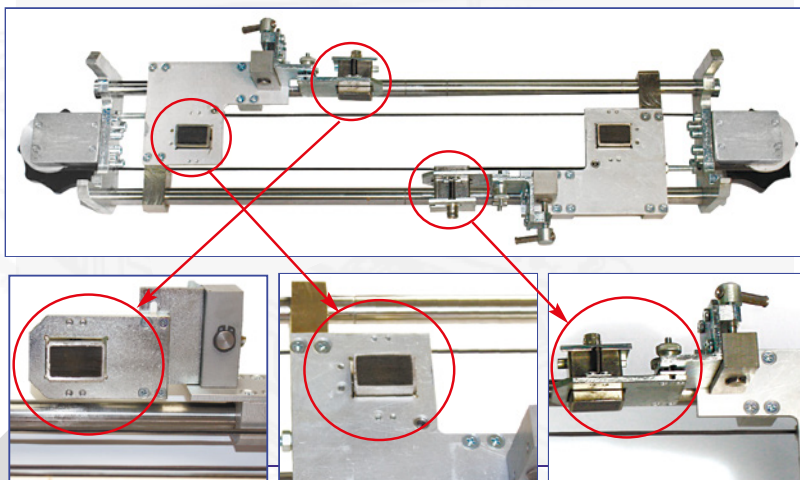
Grip-oriented and light, the device is easy to operate in the field.





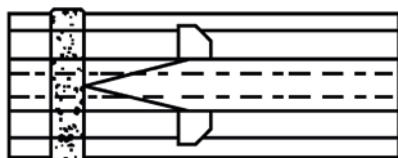
## USR-01 Scanner

USR-01 scanning device is utilized for positioning and movement of probes for inspection of rail aluminothermic welded joints.

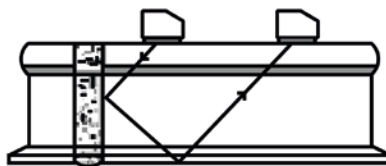


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## Scanning schemes



Rail head inspection for planar defects. Tandem technique with 70° probes.



Rail head, web and foot inspection for planar defects. Tandem technique with 45° probes



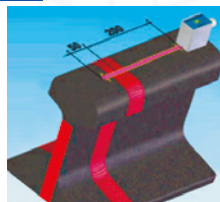
## Manual probes and scanning schemes

*Probes inspect welded joints of rails from various rail surfaces applying the pulse-echo technique.*

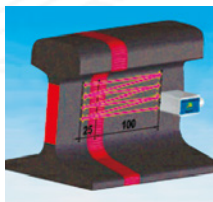


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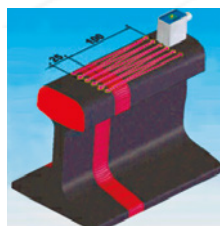
## Scanning schemes



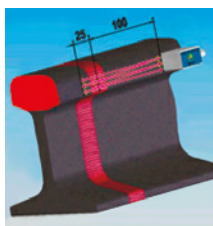
Inspection of the rail web from the running surface of the rail head with 45° probes.



Inspection of the rail web from the lateral surface of the rail web with 0° and 70° probes (a complementary scheme)



Inspection of the rail head from the running surface (70° probe).



Inspection of the rail head from the lateral face of the rail head with 0° and 70° probes.

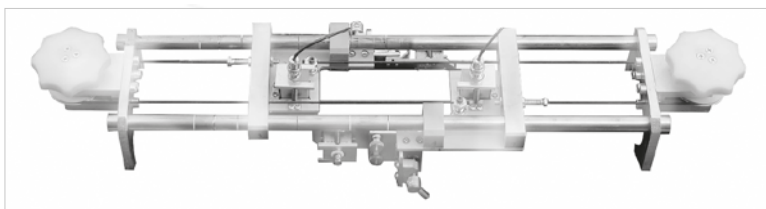
## USR-01 Delivery Specification

1.



**Sonocon B**

2.



**USR-01  
Scanner**

3.



Angle Beam Single  
Crystal Probe:  
P121-2-70-R-01  
(70 degree, 2MHz) - 2pcs

4.



Angle Beam Single Crystal  
Probe: P121-2-45-R-01  
(45 degree, 2MHz) - 2pcs

5.



Additional manual probe  
Angle Beam Single Crystal  
Probe: TAB2-45-14x14  
(45 degree, 2MHz)



## USR-01 Delivery Specification

6.



Additional manual probe  
Angle Beam Single Crystal



Probe: TAB2-70-14x14  
(45 degree, 2MHz)

7.



Additional manual probe  
Angle Beam Single



Crystal Probe: TAB-D-2-70  
(70 degree, 2MHz)

8.



Additional manual probe  
Angle Beam Single



Crystal Probe: TSD4-20  
(70 degree, 2MHz)

## USR-01 Delivery Specification

9.



Connection cable probe /  
Electronic unit (2Lemo00×2BNC)

10.



Connection cable probe /  
Electronic unit (BNC×BNC)

11.



Connection cable probe /  
Electronic unit (BNC×Lemo00)

12.



Charger

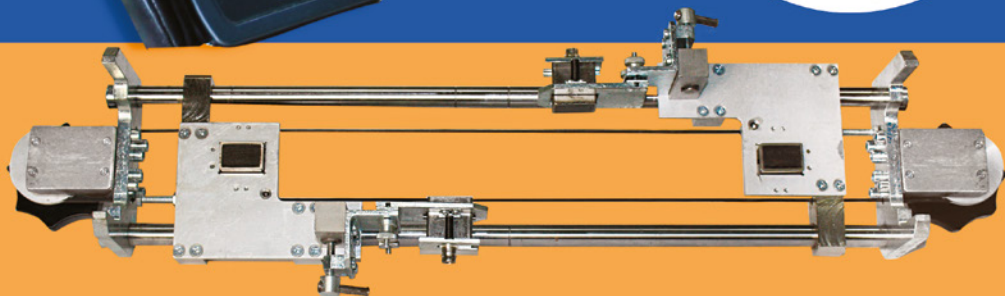
13.



Bag



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RAIL WELDED JOINTS

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