

Mobile FBW with incorporated stressing

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14th Technical Meeting of the Institute of Rail Welding

'Innovations in flash butt welding of rail'

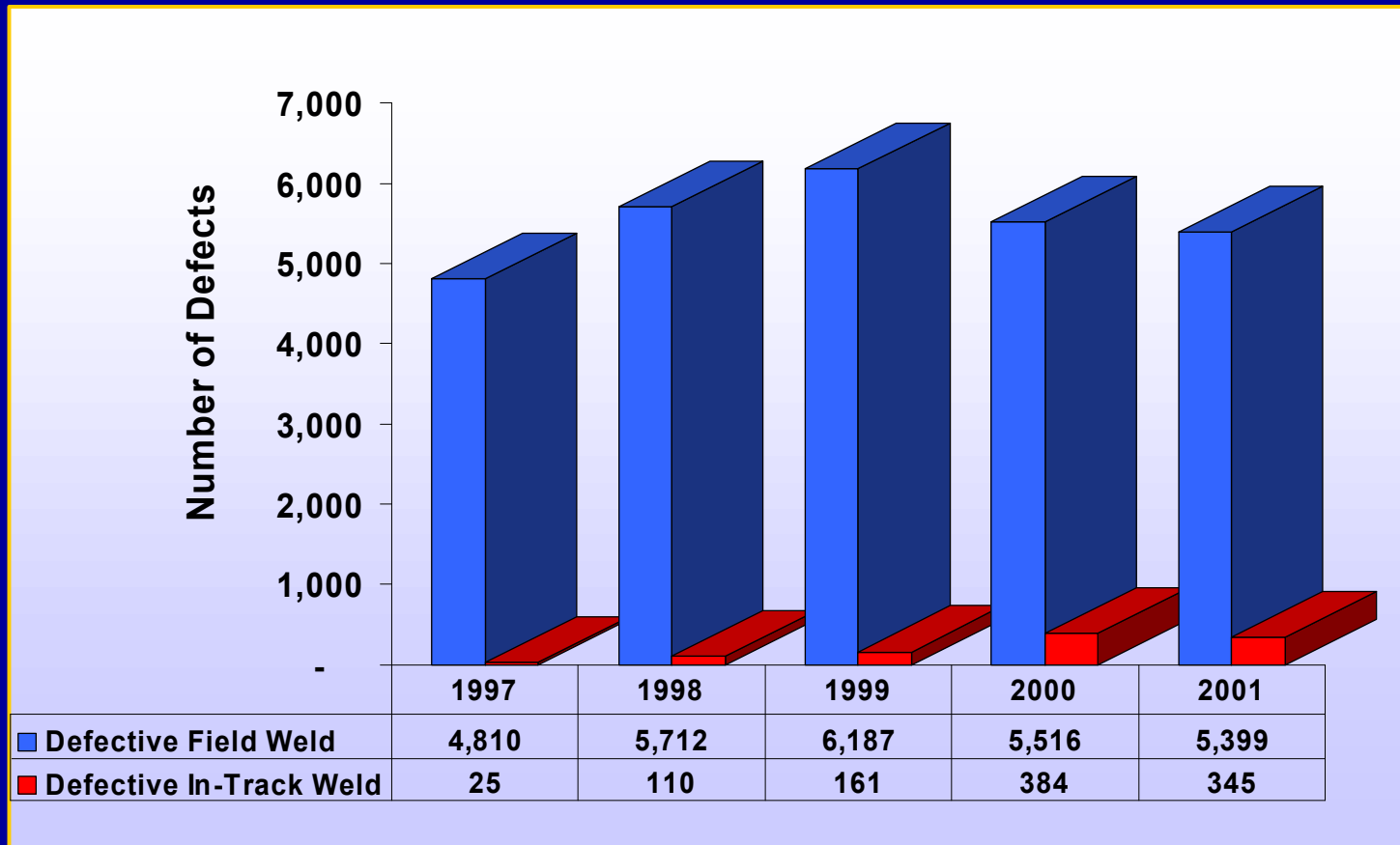
Wednesday 26 November 2008, Wolverhampton



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Defect Comparison

Thermite Field Welds vs In-Track Flash Butt Welds
(1997 - Dec 31, 2001)



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2001

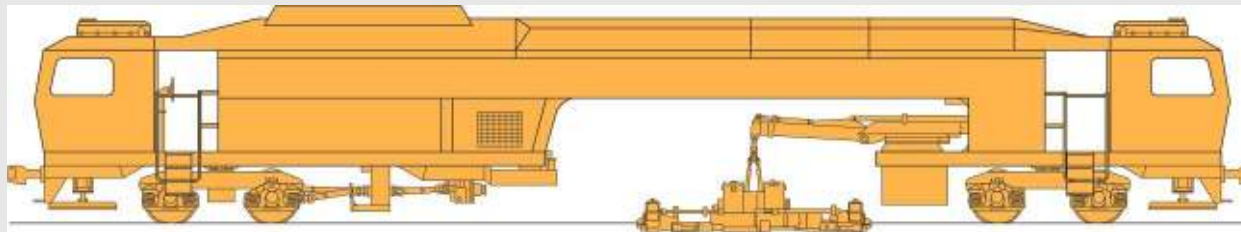
**A new generation of Plasser &
Theurer flash-butt welding
machines has been
introduced:**

The APT 600 S

APT 600 S Track bound flash-butt welding machine



Length: 22.640 mm Mass: 72 t Speed self propelled/hailed: 100 km/h



Plasser & Theurer

APT 600 S Track bound flash-butt welding machine with integrated hydraulic tensioning device



Plasser & Theurer



APT 600

Closure welding below the set temperature (neutral temperature)

- **Pre conditions:**
 - **Perfect geometric position of the track in level and line**
 - **Ballast bed according to regulations**
 - **Measuring of rail temperature**
 - **Rail fastenings are loosened and rails are relieved by rammer or vibrator**
 - **A chalk line is made every 50 m to check longitudinal movement of rails**

Features of Plasser & Theurer Mobile Flash-butt Welders

- Rails with a cross section up to 15 000 mm² can be welded
- Microprocessor control for consistently high welding quality
- Distance controlled upset impact to ensure the necessary compression in every situation
- Perfect weld geometry due to symmetrical alignment of the rail ends
- Automatic shearing of the welding seam, integrated in the welding head

Features of Plasser & Theurer Mobile Flash-butt Welders

- Recording of the main welding parameters and continuous automatic computer-controlled checking
- Welding process under 3 minutes
- Proven reliability on high-speed lines, high capacity lines and heavy haul railway lines
- Manufactured according to the high level of European standard using high quality material and newest control techniques
- Welding of head hardened rails – air quenching
- Welding of high alloy rails by PLC controlled cooling process
- Closure welds using the APT 600 S