

KASON-2000GGW Rail Static Bend Testing Machine



(Picture just for reference)

1.Application :

Servo-hydraulic Rail Static Bend Testing Machine is designed for testing of rails after welding, analysis is performed at the edge of the weld collar of an aluminothermic weld, in order to examine one of the failure modes that occur in this weld type under high axle load conditions.

Steel Dynamics has recently implemented a higher strength steel into their train rail production. The quality of the weld used to join the rail is tested using a static bend test machine.

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Using the Rail Static Bend Testing Machine during the installation of rail allows the user to periodically test the quality of welds.

EN 14587-1 Railway applications. Track. Flash butt welding of rails. Part 1. New 220 and 260 grade rails in a fixed plant

Each bend test shall be continued until the bend test values reached the specified values, in case fracture does not occur, the test shall be interrupted. To ensure that fracture occurs in the welding zone, the weld shall be notched and the bend test shall be continued until the fracture takes place.

If fracture occurs remote from the weld the fracture surfaces shall be inspected. The details of any weld defects shall be recorded in accordance with rail profile grip (Figure).

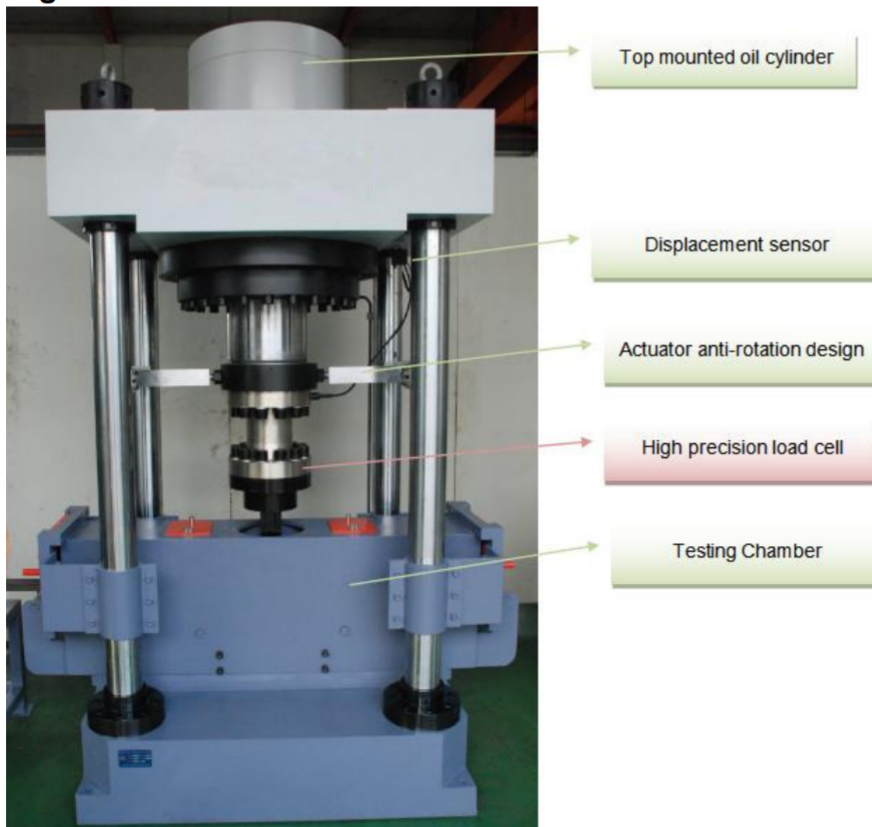
Lack of bond shall not be permitted, Flat spot shall not be considered to be lack of bond

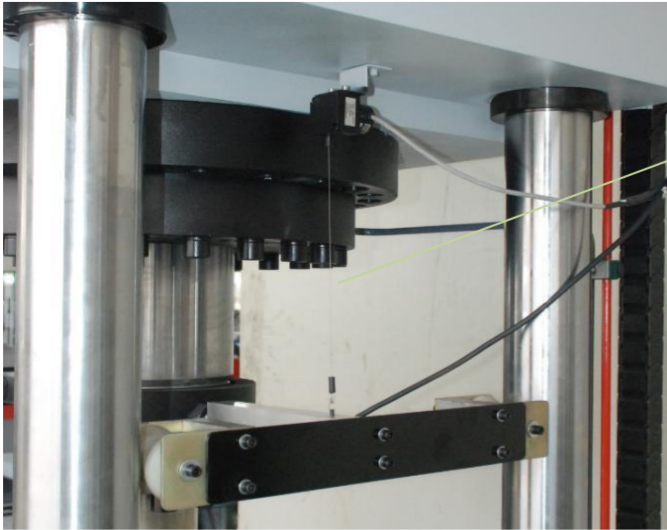
If fracture occurs remote from the weld the fracture surfaces shall be checked for the presence of die burn, which if detected shall cause the process to fail approval,. If fracture occurs within the rail for reasons other than die burn then another test weld specimen shall be substituted for testing.

2.Features:

- The machines controls allow for full pc control and data acquisition of results of load and extension.
- Rigid 4-column load frame providing superior axial and lateral stiffness and minimum maintenance, low reaction at specimen failure.
- Load frame with weight up to seven tones and load capacity up to 3000kN.
- Top mounted actuator with unchanged height of lower platform making it is easy for operators to install specimens and test fixtures.
- Fully covered rail testing chamber ensure the safety for operators
- Sliding roller bench facilitate operator to install the specimen into testing chamber

High Stiffness Load Frame



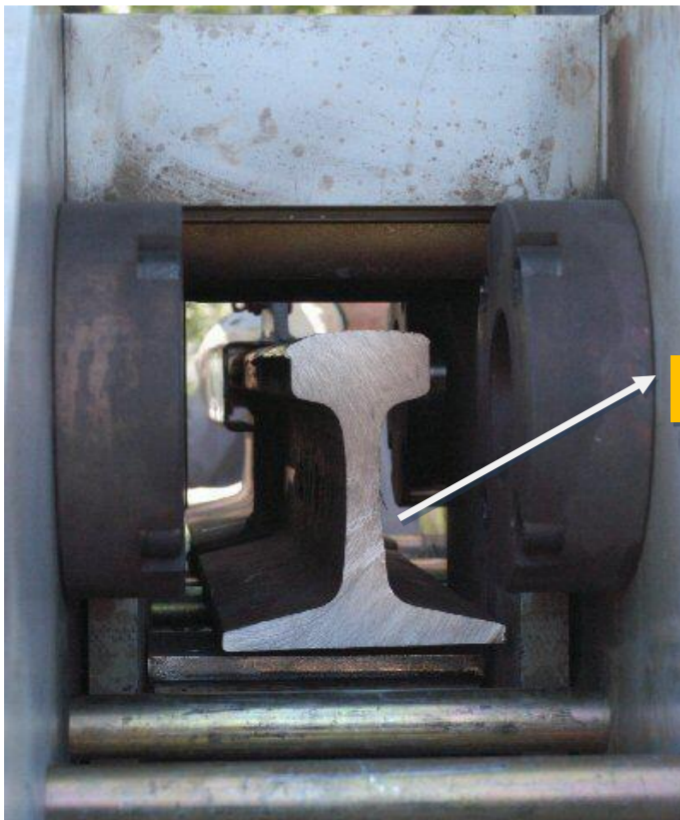
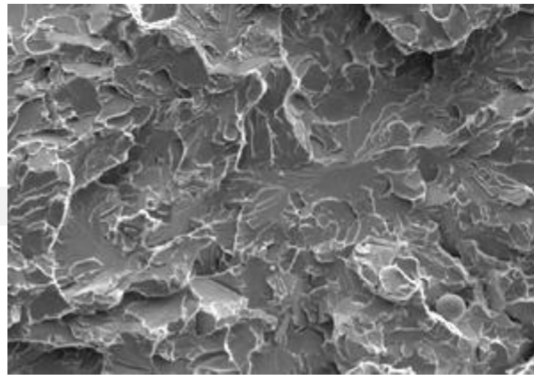


High precision displacement sensor is used to measure both displacement as well as



Rail Breaking Results

Pictured below is an example of a non-welded rail tested by the GW machine. By 3-point bending the rail, a pre-existing crack was found in the head of the rail.



Specimen sliding into testing chamber



3. Technical parameter:

Capacity	kN	2000
Load resolution	kN	Capacity/300, 000 (fully auto scaling of single measurement range)
Machine specifications	Stroke	
	in	11.81
	mm	300mm
	Testing speeds	
	in/s	0.0276~0.0472
	mm/s	0.7~1.2
	Loading rate	
	kN/S	40~120
Bend test arrangement	Bearer span	
	in	39.37±0.197
	mm	1000±5
	Bearer radius	
	in	0.984~2.756
	mm	25~70
Hardness of bending tip	HRC	50-55
Surface roughness of bending tip	µm	Ra≤6.3
Rail size		60E1~46E2
Machine dimensions	Load frame	
	in	62.3*39.4*98.4
	m	1.6*1.0*2.5
	Control console	
	in	45.3*31*35.4
	mm	1150*780*900
Weight	lbs	15, 432.00
	kg	7, 000.00



Authentication Certificate of Quality Management System

Registration No.19922Q01072R0S

This is to certify that

Jinan Kason Testing Equipment Co., Ltd.

Unified Social Credit Code: 9137010458994939X0

Registered/Production Address: No. 4715, Jingshi West Road,
Huaiyin District, Jinan City, Shandong Province

Office Address: Room 2-1108, Harmony Square, Huaiyin District, Jinan City

Is in conformity with :

GB/T 19001-2016/ISO 9001:2015

The certificate is valid for the following scope :

Assembly and sales of testing machines

This certificate should be used effectively with the legal requirements of the administrative license, qualification license, compulsory certification, which the certification scope involved.

In the case that the organization regularly receives surveillance assessments, the certificate shall be valid when used together with the Quick Response Code.

Date of Issue: 2022-07-19
Date of Expiry: 2025-07-18
Date of Initial Certification: 2022-07-19

General Manager



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China Standard Huaxin (Beijing)
Certification Center Co., Ltd.



Address of Certification Authority: 5 Floor, YuQuan Building, No.3 Shijingshan Road, Shijingshan District, Beijing Tel: 010-88255986 P.C.: 100049
Note: The detailed information is available on the Certification and Accreditation Administration of the People's Republic of China official website (www.cnca.gov.cn) the authority's website(www.cshcc.cn) and the Quick Response Code on the left.




MACHINERY DIRECTIVE ATESTATION OF CONFORMITY

Technical file of the company mentioned below has been inspected and audit has been completed successfully.

2006/42/EC Machinery Directive Annex VIII has been taken as references for these processes.

Company Name	: Jinan Kason Testing Equipment Co., Ltd.
Company Address	: No.4715, Jingshi West Road, Huaiyin District, Jinan, Shandong, China
Related Directives and Annex	: 2006/42/EC Machinery Directive/Annex VIII
Related Standards	: EN ISO 12100:2010; EN 60204-1:2018
Product Name	: Testing Machine
Report No and Date	: TCF-JKTE230605-MD
Product Brand/Model/Type	: WDS-1, WDS-2, WDS-3, WDS-5, WDS-10, WDS-20, WDS-30, WDS-50, WDS-100, WDS-200, WDS-300, WDW-1E, WDW-2E, WDW-3E, WDW-5E, WDW-10E, WDW-20E, WDW-30E, WDW-50E, WDW-100E, WDW-200E, WDW-300E, WDW-500E, WDW-600E, WDW-1000E, ETM103, ETM203, ETM303, ETM503, ETM104, ETM204, ETM304, ETM504, ETM105, WE-300D, WE-600D, WE-1000D, WE-2000D, HUT305S, HUT605S, HUT105S, HUT126S, WEW-300D, WEW-600D, WEW-1000D, WEW-1200D, WEW-2000D, WEW-3000D, HUT305E, HUT605E, HUT105E, HUT126E, HUT-A306E, HUT-A206E, WAW-300D, WAW-600D, WAW-1000D, WAW-1200E, WAW-2000E, WAW-3000, WAW-2000A, WAW-3000A, WAW-4000A, HUT-A206W, HUT-A306W, HUT-A406W, HUT305W, HUT605W, HUT105W, HUT126W, WAL, LAW, HUT-L, JB-300, JB-300B, JB-500B, JBS-300, JBS-500, JBW-300, JBW-500, JBDW-300, JBDW-500, CST-50, VU-2Y, VU-1S, DWC-40, DWC-60, DWC-80, DWC-100, DWC-196, YES-1000, YES-2000, YES-3000, YAW-1000, YAW-300, YAW-2000, YAW-3000, YAW-5000, NDS-200, NDS-500, NDS-1000, NDS-2000, NDW-200, NDW-500, NDW-1000, NDW-2000, NDW-3000, NDW-5000, NDW-10000, EZ-1, EZ-3, EZ-10, JWJ-10, TLS, TLW, HWS, PLS-20, PLS-50, PLS-100, PLS-300, PLS-500, PLS-1000, KASON-1, RDJ-10, RDJ-20, RDJ-50, RDJ-100, DWTT-20000, DWTT-30000, DWTT-40000, DWTT-50000, DWTT-80000, DWTT-100000, PTF-302, PTF-302M, PTF-502, PTF-502M, PTF-302T, PTF-502T, PTF-302W, PTF-502W, PTF-502TW, PTF302CW, PTF452CW, PTF602CW, PTF752CW, PTF302CT, PTF452CT, PTF602CT, PTF752CT, PTFD302W, PTFD502W, PTFD302T, PTFD502T, PTFD302CW, PTFD452CW, PTFD502CW, PTFD752CW, PTFD752CT, PTFD302G, HCT106, HCT206, HCT306, KSC1M, HYJ, HEZ-3, HEZ-5, HEZ-10, HEZ-20, KSBT-10, KASON 370.02, KASON 370.05, KASON 370.10, KASON 370.25, KASON 370.50, MMW, GBW-60B, CBS-60B, HUT, ETM, XNR, GW-40, GW-50, MRS, MMU, MRH, GBW, GW, LSW, HBT, GLY, GCJ-1000, GWQ-1000, GNZ-1000, GQR-1000, GJR-300, GSS-1000, GMS-100, GTW-500, GQC-5, GCG-100, HR-150A, HRD-150, HRS-150, XHR, HB, HVS, HV, HBRV, W-20, HBA-1, LHT, Q-2A, MP-2, XQ-2B, XD-30M, 4XCE, 4XB, JSZ, MOPAO, MPT, P, MP, BG, LBG-32, MPJ-35, Q-Z, Q-100B, SQ, Q-3A, QG-4, LSQ, LDQ, GTQ-5000A, GTQ-5000B, DTQ, ZXQ, 4XC, HST, KASON, KS, KSCUT, HTR, HTPR, HTB, HSTR-45S, HTV, HTMV, HTBRV, METRPRESS, MPJ

Certificate Number	: M.2023.206.C86313
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Registration Date	: 08.06.2023
Reissue Date/No	: -
Expiry Date	: 07.06.2028


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