TESMEC Limited: Test house, Unit 14-15 BTC Estate
Anchor Road, Coseley,
Bilston, West midlands, WV14 9NA
Telephone: 07947 103 644

ENGINEERING SERVICES

Test report reference: TES001176TR-1:

Scaffold coupler verification survey: Report reference number TES001176TR-1
Client: Ram Steel Ltd
Unit C, Barton Turn
Barton Under Needwood
Burton-on-Trent, Staffordshire
DE13 8EB
Number of pages: 3
Date of survey: 22nd January 2021
Order number reference: Verbal instruction

Description of submitted sample:	Adjustable builders trestles	Markings affixed	None
Number of samples submitted:	2	Standard	BS1139-4: 1982 Appendix A
Material Finish	Pacified	Application	Compressive load to failure

Quality control verification check only in accordance with client's specifications; The samples submitted for test have been subject to the specified test as per the stated standard and section reference and therefore may not fully comply to the standard as further testing and technical analysis in accordance with all relevant sections of have not been conducted.

Item description: *Fabricated adjustable builders' trestles*
Material not stated: Assumed carbon steel.
Closed height: 1080 mm at first location hole.
Maximum height: 1670mm.
Load bearing SHS span = 960mm, 37mm x 37mm section. Welded stop ends 30mm
Base type triangular with a width of 595mm.
Outer tubular section diameter 38mm nominal.
Holes punched through inner tubular section, Inner section diameter 32mm nominal
Pin diameter 9mm nominal
Product finish: Silver/galvanised

Identification mark affixed to item: *Non recorded.*

Client submitted drawing numbers: *Not submitted at time of survey.*

Client design review Ref: *Internal review by client*

Quantity submitted for test: *2 number samples submitted for compressive load application.*

Client submitted British standard or procedure number*: Testing conducted in guidance with BS1139-4: 1982.*

Test equipment: *Calibrated load cell number 18A226666, certificate number 13674, units recorded in kN. Manual digital displacement monitor.*

NOTE: ***The dimensions recorded are to be evaluated by the client to ensure conformity of product to the requirements of the standard. The dimensions have not been cross referenced by TESMEC ltd at time of load application survey.***

1.2. Submitted load requirements.

Testing conducted with guidance from BS 1139-4: 1982. Appendix A section A1 only.
Each submitted sample was erected at its maximum height 1degree 30 out of plumb.

No inserts or shims were fitted to improve out of true/straight between adjustable members as shown in section 1.3 diagrams.
75mm long rigid steel bearing pads were positioned as denoted with a width equal to the top of the trestle cross member.
The load was applied in the compressive direction as denoted (M) as in figure 1.3 until failure was recorded.
No lateral restraint to top and bottom of each sample was in place, free standing load application only.

Sample 1 tested at full height through to ultimate failure or no more load achievable.
Sample 2 tested with datums taken at every 0.5kN through to 11.25kN

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1.3. Load diagram

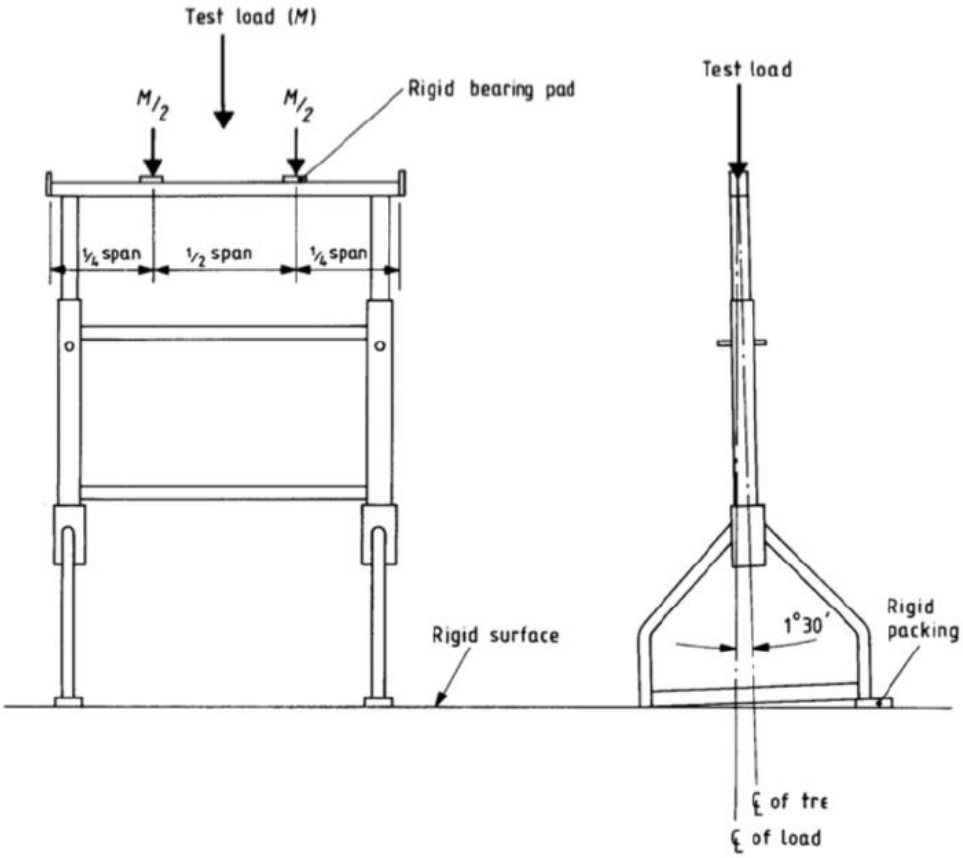

Figure 3-1 Trestle Test Arrangement

(Source: BS 1139-4:1982)

1.4. Test data

Initial pilot test of sample 1 test T1176-1 showed no more load achievable at a recorded force of 12.78kN
Mode of failure: Compressive buckling over SHS lateral load bearing member (see image)

Sample 2 achieved an ultimate force of 13.18kN
Mode of failure: Compressive buckling over SHS lateral load bearing member (see image)

Both samples exceeded the ultimate value of 11.25kN

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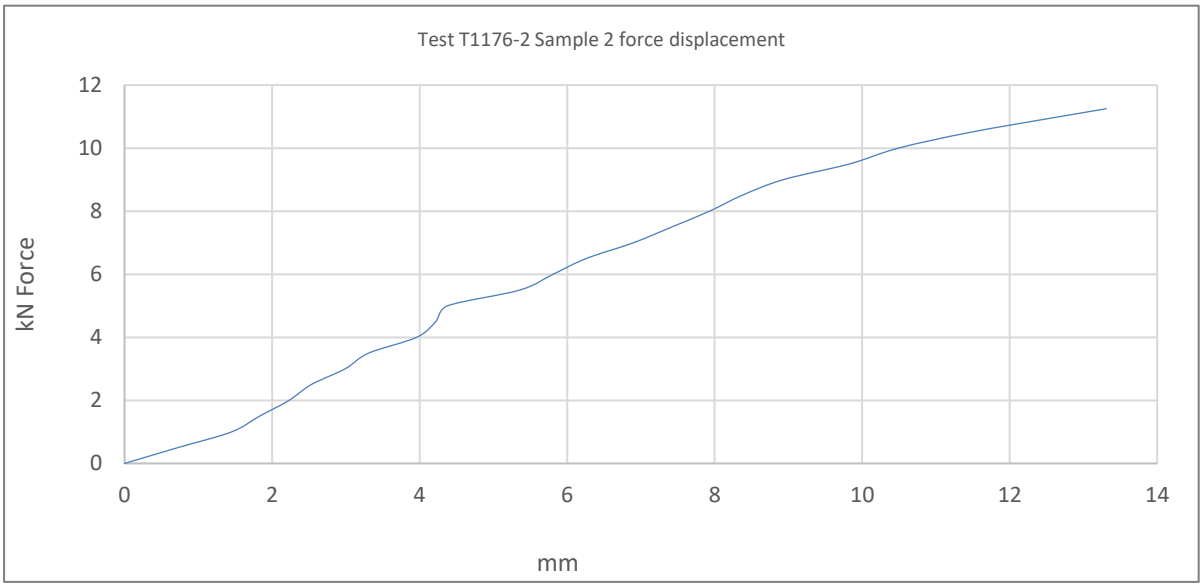
1.4.1. load displacement graph



Images of failure modes both samples

END OF REPORT

Issue date: 22nd January 2021 Test machine number: 500kN compressive frame and load cell
Authorised on behalf of TESMEC Limited:

Print Stuart J Rogers **Signature**: **Position:** Test house Manager.