

INSPECTION REPORT N° ECL/BVKOL/DN700/IR/001R2

Initial Interim Final Resident

Inspection requested by: M/s. Electrosteel Castings Limited.

BV Job Nr: IND.K.4.20.0291

Project: For M/s. Electrosteel Castings Limited, Kolkata	IPO Ref (If applicable): N/a (BV internal P/o)
BV Client: M/s. Electrosteel Castings Limited, Kolkata	P/o nr: N/a
Manufacturer/Vendor: M/s. Electrosteel Castings Limited, Kolkata	P/o nr: N/a
Sub-Vendor (If applicable): N/a	Buyer: N/a
Inspection Location: Electrosteel Castings Ltd., Khardah.	Previous Inspection (If applicable): Nil
Inspection performed on: 19.08.2020 & 08.10.2020 to 09.10.2020	Next Inspection (If applicable): N/a

MATERIAL / SUBJECT OF INSPECTION <input type="checkbox"/> Refer to attachment section J instead (Indicate if separate material list is provided in attachment)	ITEM / TAG Nr	QTY As per P/O (Pcs.)	QTY Offered for inspection	Balance Qty
Type testing (Positive internal hydrostatic pressure in aligned condition and with deflected condition and Cyclic Internal Hydraulic Pressure in aligned condition) of Ductile Iron Pipes and Fittings ranges from DN 700 to DN 1000 with Electrolock Restrained Flexible Joint systems in accordance with EN 545: 2010, ISO 2531: 2009, BSEN 598: 2007+A1:2009 and ISO 10804: 2018				

A – INSPECTION RESULT

Satisfactory
(Without comments) **Satisfactory with comments**
(Any of trailing Punch or Non Conformity items is still open) **Not Satisfactory**
(NCR raised during the inspection)

Inspection Summary: (for details refer to section E)

Positive internal hydrostatic pressure testing of DN 700 Electrolock Restrained Flexible joint in aligned and deflected condition at 50 bars and Cyclic Internal Hydraulic Pressure testing from 31 bar to 36 bar.

Note for Revision1: Type test conformance to BSEN 598: 2007+A1:2009 included, in view of identical joint design criteria and manufacturing process.

Note for Revision 2: Inclusion of Cyclic Internal Hydraulic Pressure test.

Open Non Conformities: Yes, details in section G No

Open Punch List Items: Yes, details in section H No

Release Note Issued: Yes, number(s): No

BV Inspector: Malendra Kumar

Malendra Kumar

(Name and Signature)



BV Coordinator:

(Name and Signature)

BV Office: BV Kolkata

Inspection Report Date: 15.03.2021

Distribution: ECL BV KOLKATA

Attachments Report:

Yes, details in section J No

B – REFERENCE DOCUMENTATION:

Refer to attachment section J instead

(Indicate if separate document list is provided in attachment)

Title	Reference n°	Rev.	Approval status	Approved by	Date
Test Reports on positive internal hydrostatic pressure in aligned and deflected condition			(as final)		

C – ATTENDEES

Name	Position	Representing
Malendra Kumar	Surveyor	BVIL
Sanjeeb Roy	Operational Manager	BVIL
Somenath Jana	Sr. Foreman	ECL, Khardah

D - MEASURING & TESTING EQUIPMENT USED

Refer to attachment section J instead

(Indicate if separate equipment list is provided in attachment)

Equipment Type	Equipment Identity n°	Calibration traceable to NABL/ISO 17025 accredited lab(Yes/No)	Last Calibration Date	Expiry Date
Pressure Gauge	PG-03110969	Yes	08.08.2020	08.02.2021
Pressure Gauge	PG-0208248	Yes	12.07.2020	12.11.2020
Inside Micrometer	IM-DEV-40	Yes	02.01.2020	02.01.2021
Vernier Caliper	VC-2196449	Yes	20.03.2020	20.09.2020
Pie Tape	CT-121041	Yes	11.08.2020	11.08.2021

Whether above equipment(s) checked for suitability and condition (Yes/No): Yes

E - INSPECTION DETAILS

Sr.no.	QAP stages	Evidences attached (Yes/No)
1.	Testing on sample (sample pipe no. -12W52)	Yes
2.	Document review	Yes

E1 – Details of Witness (W) & Hold (H) Inspection Points

Introduction :

Under the request of M/s Electrosteel Castings Limited, the undersigned Bureau Veritas Surveyor has visited their works for the witness of type testing as per EN545: 2010, BSEN 598: 2007+A1:2009, ISO 2531: 2009 and ISO10804: 2018 at Khardah.

BV Scope of work :-

Witness of type testing as per EN545: 2010, ISO 2531: 2009, BSEN 598: 2007+A1:2009 and ISO10804: 2018

Manufacturing Progress Status : N/a

Details of Inspection activities carried out with respect to scope of work :

The inspection was carried out at manufacturer's workshop according to the Requirements & specification listed above. For details please refer the following:

ASSEMBLY	TEST	Pressure	Duration	Condition	Result
ELECTROLOCK RESTRAINED FLEXIBLE JOINT DN 700 PRESSURE CLASS 30 (PFA 30 bar)	Positive internal hydrostatic pressure as per Clause 7.2.2 of EN 545:2010, Clause 7.5 of BSEN 598:2007+A1:2009, Clause 7.1 of ISO 2531:2009 and Clause 5.3 of ISO 10804:2018	50.0 Bar	2 Hrs	<ul style="list-style-type: none"> With Shear Load Maximum Annular Gap Minimum Pipe Thickness 	Conform
	Positive internal hydrostatic pressure as per Clause 7.2.2 of EN 545:2010, Clause 7.5 of BSEN 598:2007+A1:2009, Clause 7.1 of ISO 2531:2009 and Clause 5.3 of ISO 10804:2018	50.0 Bar	2 Hrs	<ul style="list-style-type: none"> Deflected (3°) Maximum Annular Gap Minimum Pipe Thickness 	Conform
	Cyclic Internal Hydraulic Pressure as per Clause 7.2.5 of EN 545:2010, Clause 7.8 of 598:2007+A1:2009 and Clause 5.5 of ISO 10804:2018	31 Bar to 36 Bar	24000 Cycles	<ul style="list-style-type: none"> With Shear Load Maximum Annular Gap Minimum Pipe Thickness 	Conform

E2 – Details of Monitoring and Surveillance Patrols

Tick if conducted during the visit

N. A.

E3 – Details of Certificates Review

Tick if conducted during the visit

Applicable Documents & Status of Approval N/a

Results of Inspection :

Offered item as mentioned in Supply/Subject of Inspection found conforming to the requirements of Type Testing as per EN 545:2010, BSEN 598:2007+A1:2009, ISO 2531: 2009 and ISO 10804:2018. On basis of that witnessing of testing is carried out and sample pass the requirement.

Calibration records and certificates reviewed for measuring instruments and gauges and found valid and traceable to national standards. Equipment condition & suitability checked and found satisfactory at the time of inspection.

BVIL has only verified the technical content during the certificate review of bought out item and not accountable to any compliance with lab traceability to ISO /IEC 17025 or NABL Accredited laboratory.

Disclaimer: The inspection report is issued on the basis of sample checks and supplier is responsible for the homogeneity. By issuing this Report BVIL does not take responsibility for any statutory requirements for the destination, which shall be the responsibility of M/s Electrosteel Castings Limited.

Note- a. Our inspection will not conform to any mandatory inspection of the destination country.

b. LC requirement if any, not verified.

F – HEALTH, SAFETY & ENVIRONMENT COMMENTS

(Comment on Observations and Actions Taken During the Inspection)

2 minutes for my safety ensured at the start of the inspection. Necessary PPE used as per the manufacturer's safety policy.

G- NON CONFORMITIES

Refer to attachment section J instead
(Indicate if separate punch list is provided in attachment)

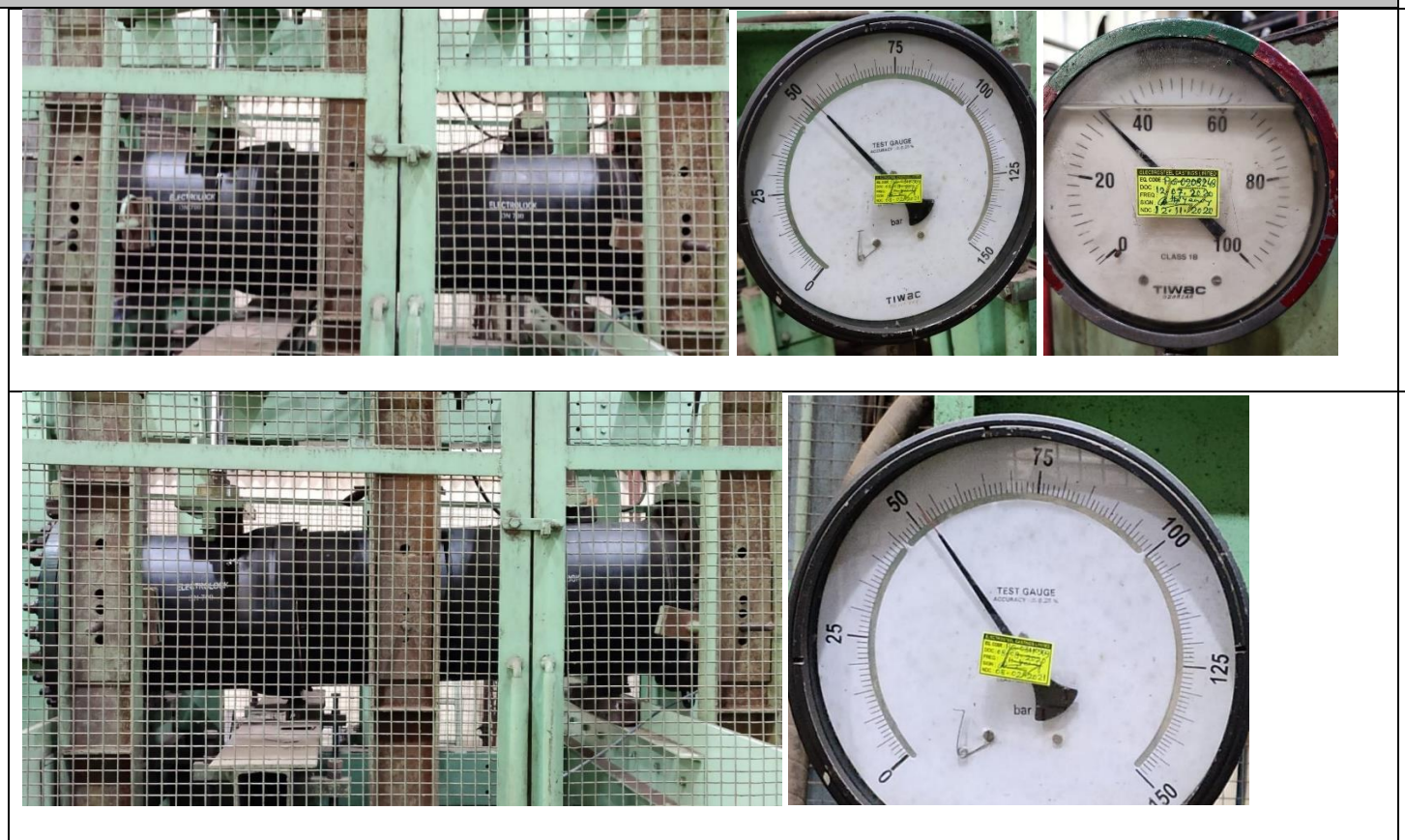
Item	Description	Status	Raised on	Report #	Closed on	Report #	Comments
Nil							

H – PUNCH LIST

Refer to attachment section J instead
(Indicate if separate punch list is provided in attachment)

Item	Description	Status	Raised on	Report #	Closed on	Report #	Comments
Nil							

I - DIGITAL PICTURES



J – ATTACHMENTS

Item	Attachment Name	Total Pages	Description
1	Supporting documents	--	Test Reports on Positive Internal Pressure Test (Aligned and Deflected condition- Format No. WT-02-20A/1-01), Cyclic test report.

END OF REPORT