

Report No.: IR-IND11018122505006001

Date: May 08, 2025

General

TUV COORDINATOR: JESSICA HU	TUV INSPECTOR: ZHANGYONGLIN
WORK ORDER No. (TUV NORD) IND-CUC-C2505006	APPROVAL #:
TYPE OF VISIT: <input type="checkbox"/> PIM <input type="checkbox"/> INITIAL INSP. <input type="checkbox"/> IN-PROCESS INSP. <input checked="" type="checkbox"/> FINAL INSP. <input type="checkbox"/> ORDER STATUS	

Client/Project Information

CLIENT: Hebei Abter Steel Pipe Co., Ltd
PROJECT: TPI inspection for stainless steel pipes
PO No.: N/A

Equipment/Material Description

PURCHASE ORDER NO.: N/A	TAG / ID NO.: N/A
DESCRIPTION: coupling inspection (see section 3.2)	
PRIMARY SUPPLIER: HEBEI ABTER STEEL PIPE CO., LTD	SUB-SUPPLIER: N/A
LOCATION: CANGZHOU CITY, HEIBEI PROVINCE, CHINA	LOCATION: N/A
CONTACT: MR. HUANG	CONTACT: N/A
SHOP ORDER NO.: N/A	SHOP ORDER NO.: N/A

PROGRESS

ENGINEERING: N/A	ENGINEERING: (% COMPLETE) N/A
MATERIAL: N/A	MATERIAL: (% COMPLETE) N/A
FABRICATION: N/A	FABRICATION: (% COMPLETE) N/A
PO DELIVERY DATE: N/A	PO DELIVERY DATE: N/A
SCHEDULED COMPLETION DATE: N/A	SCHEDULED COMPLETION DATE: N/A

Summary

DATE OF LAST VISIT: N/A
DATE(S) OF THIS VISIT: May 07, 2025
NEXT SCHEDULED VISIT: N/A
NON-CONFORMITY REPORT ISSUED DURING THIS VISIT: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES NCR NO.:
OUTSTANDING NON-CONFORMITY REPORT: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES NCR NO.:
INSPECTION RELEASE ISSUED DURING THIS VISIT: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES RELEASE NO.:
ACTION POINTS: (NCR'S, CLARIFICATIONS, PENDING APPROVALS, ETC.)
NONE

INSPECTION ACTIVITIES

1. INSPECTION ACTIVITIES IDENTIFICATION: (PLACE AN X MARK IN EACH OF THE BOXES BELOW THAT CORRESPONDS WITH AN INSPECTION ACTIVITY VERIFIED OR PERFORMED. EACH ACTIVITY MARKED MUST BE FULLY EXPLAINED BELOW AT SECTION 3. "INSPECTION DETAILS".

<input type="checkbox"/> MATERIAL IDENTIFICATION AND TRACEABILITY	<input type="checkbox"/> MECHANICAL TESTING (TENSILE)
<input type="checkbox"/> REVIEW OF WELDING PROCEDURE SPECIFICATION AND PROCEDURE	<input type="checkbox"/> PRESSURE / LEAK TEST (HYDRO-STATIC, AIR, HELIUM, ETC.)
<input type="checkbox"/> QUALIFICATION RECORD	<input type="checkbox"/> BALANCING OF ROTATING PARTS
<input type="checkbox"/> REVIEW OF WELDER/WELDING OPERATOR QUALIFICATION RECORDS	<input type="checkbox"/> SHAFT / ROTOR RUN OUT
<input type="checkbox"/> VISUAL INSPECTION OF WELD JOINT FIT-UP/BACK GOUGE PREPARATIONS	<input type="checkbox"/> CLEARANCE CHECKS
<input type="checkbox"/> CONTROL OF WELDING CONSUMABLES (FILLER METALS, RODS, WIRE, ETC.)	<input type="checkbox"/> VIBRATION / NOISE TEST
<input type="checkbox"/> IN-PROCESS WELDING INSPECTION (ADHERENCE TO WPS – ESSENTIAL VARIABLES)	<input type="checkbox"/> MECHANICAL RUNNING TESTS
<input checked="" type="checkbox"/> VISUAL INSPECTION OF COMPLETED WELDS FOR DETECTION OF DEFECTS /	<input type="checkbox"/> OVER-SPEED TRIP TEST
<input type="checkbox"/> DISCONTINUITIES	<input type="checkbox"/> CHECK OF TRIP SYSTEMS (LOW / HIGH OIL PRESSURE, VIBRATION, ETC)
<input checked="" type="checkbox"/> FULL DIMENSIONAL INSPECTION FOR COMPLIANCE WITH DESIGN DRAWING	<input type="checkbox"/> LOAD / NO LOAD TEST
<input type="checkbox"/> REVIEW OF RADIOGRAPHS	<input type="checkbox"/> OPERATIONAL TEST
<input type="checkbox"/> MAGNETIC PARTICLE / LIQUID PENETRANT TESTS	<input type="checkbox"/> NPSH TEST
<input type="checkbox"/> ULTRASONIC TESTING	<input type="checkbox"/> CLEANING / SANDBLASTING / PAINTING
<input type="checkbox"/> NDE TEST REPORTS	<input type="checkbox"/> MARKING AND IDENTIFICATION (NAME PLATE DATA, TAGS, ETC.)
<input type="checkbox"/> INTERNAL INSPECTION	<input type="checkbox"/> VENDOR DATA REVIEW (CMTR, TEST RECORDS, DATA SHEETS,
<input type="checkbox"/> VERIFICATION OF SPECIFIED POST WELD HEAT-TREATMENT	<input type="checkbox"/> QC RECORDS)
<input type="checkbox"/> HARDNESS TEST: HV HB HRC	<input type="checkbox"/> MANUFACTURER AUDIT
NOTE: EXPEDITING ONLY.	<input checked="" type="checkbox"/> PMI CHECK

2. REFERENCE DRAWINGS/SPECIFICATIONS: (INCLUDE REVISION NO.'S)

TITLE	DOCUMENT NUMBER	REVISION NO	APPROVAL STATUS
Threading, Gauging, and Inspection of Casing, Tubing, and Line Pipe Threads	API 5B	2021	CURRENT
Specification for Casing and Tubing	API 5CT	2025	CURRENT

3. INSPECTION ACTIVITIES:

3.1) Scope of work:

TUV NORD inspector inspected stainless steel pipes include the dimension, visual inspection (include the weld seam) and PMI inspection.

3.2) coupling quantity:

description	QTY (m)
ASTM A312 TP321, 325x12.0	600
ASTM A312 TP321, 426x8	96
ASTM A312 TP321, 530x8	36
ASTM A312 TP321, 630x8	144
ASTM A312 TP321, 720x8	36
ASTM A312 TP321, 820x10	144
ASTM A312 TP321, 1020x10	60
ASTM A312 TP321, 1420x10	144

3.3) The Inspection Activities:

1	Visual inspection (include weld seam) 20%
2	Dimension inspection: include OD, thickness, length -randomly 20%
3	PMI inspection 20%

3.4) The details of inspection activities performed:

3.4.1 Visual inspection include the weld seam (20%)

TUV inspector checked stainless steel pipe visual at randomly 20%, during inspection inspector have checked the weld seam, the weld seam was auto weld seam, the weld seam was good, inspector also checked the visual of the pipe surface have found scratches, knocked damage on the pipe end, and most of the pipes end have burrs and some of the pipes surface have the dirty oil, the results of the visual inspection was not acceptable.

3.4.2 Dimension inspection (20%)

TUV NORD inspector performed OD, thickness and length inspection at randomly 20% for stainless steel pipes according the client requirement. Detail as follow:

Unit: mm

size	325x12.0	OD	thickness	length
tolerance		325 ± 1%	12 ± 12.5	6000 -20
actual measured		326.7-327.3	11.6-11.7	5998-6003

size	426x8	OD	thickness	length
tolerance		426±1%	8±12.5	6000 -20
actual measured		426.8-427.7	7.8-8.0	6000-6002
size	530x8	OD	thickness	length
tolerance		530±1%	8±12.5	6000 -20
actual measured		531.8	7.7-7.9	5995
size	630x8	OD	thickness	length
tolerance		630±1%	8±12.5	6000 -20
actual measured		631.5-632.1	7.6-7.8	6000-6002
size	720x8	OD	thickness	length
tolerance		720±1%	8±12.5	6000 -20
actual measured		722-722.2	7.7-7.9	5998-6000
size	820x10	OD	thickness	length
tolerance		820±1%	10±12.5	6000 -20
actual measured		823.8-824.5	9.6-9.8	5998-6000
size	1020x10	OD	thickness	length
tolerance		1020±1%	10±12.5	6000 -20
actual measured		1021-1021.6	9.7-9.8	5998-6000
size	1420x10	OD	thickness	length
tolerance		1420±1%	10±12.5	6000 -20
actual measured		1419.4-1419.7	9.7-9.9	5997-6000

The results of the dimension inspection was acceptable according the client requirement..

3.4.3 PMI inspection (20%)

TUV NORD inspector performed PMI inspection at randomly 20% for each item. the main material content Cr, Ni, content were acceptable according the standard ASTM A312 TP321 material requirement, the results of the PMI inspection was acceptable.

3.5) Conclusion:

The above coupling have been performed by the inspector of TUV NORD. For the mentioned inspection scope, the above-mentioned stainless were in accordance with ASTM A312 and client requirement. The check result was not satisfactory.

3.6) Pictures taken during visit:



VISUAL CHECK



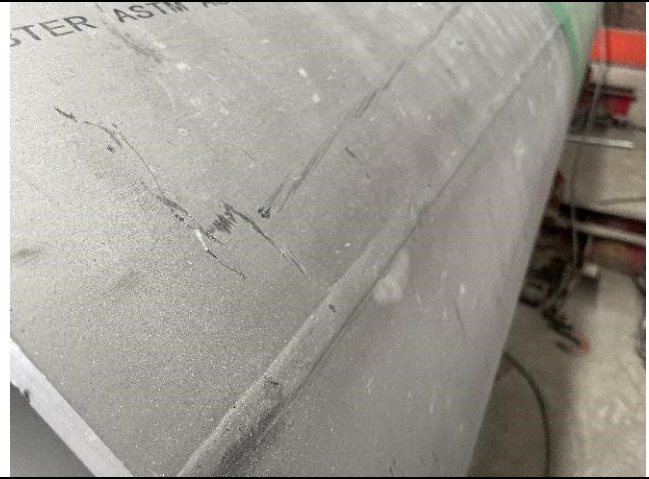

WELD SEAM VISUAL CHECK




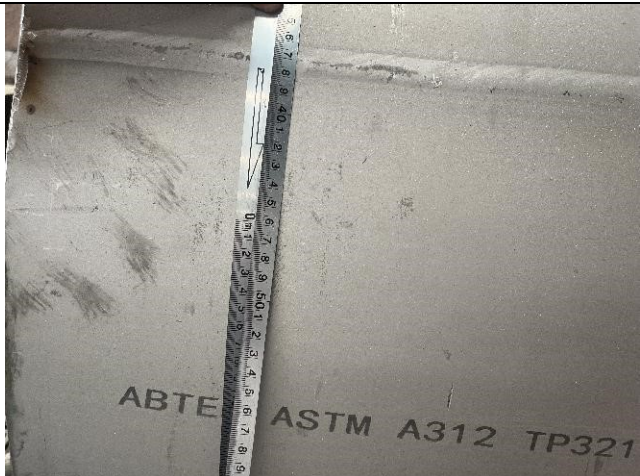
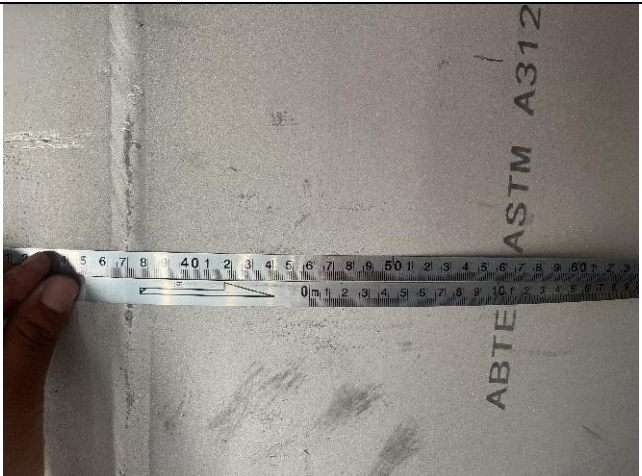


KNOCKED DAMAGE WAS FOUND



KNOCKED DAMAGE WAS FOUND

	
<p>DIRTY OIL ON SURFACE</p>	<p>SCRATCHES ON SURFACE</p>
	
<p>WELD SEAM VISUAL CHECK</p>	<p>WELD SEAM VISUAL CHECK</p>
	
<p>DIMENSION CHECK</p>	<p>DIMENSION CHECK</p>

	
DIMENSION CHECK	DIMENSION CHECK
	
DIMENSION CHECK	DIMENSION CHECK
	
DIMENSION CHECK	DIMENSION CHECK



DIMENSION CHECK



DIMENSION CHECK



DIMENSION CHECK



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DIMENSION CHECK



PMI CHECK



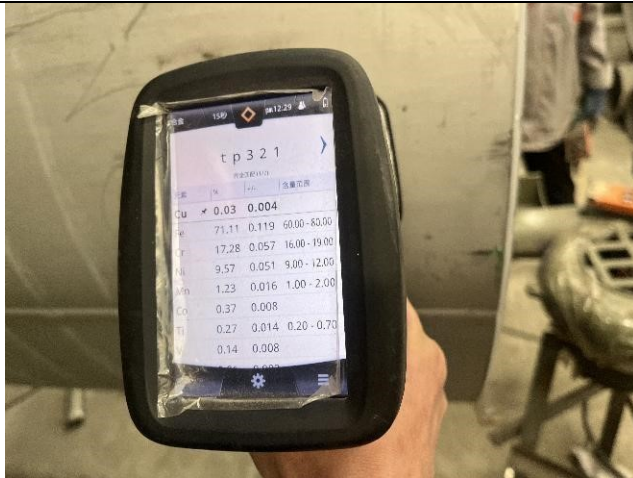
PMI CHECK



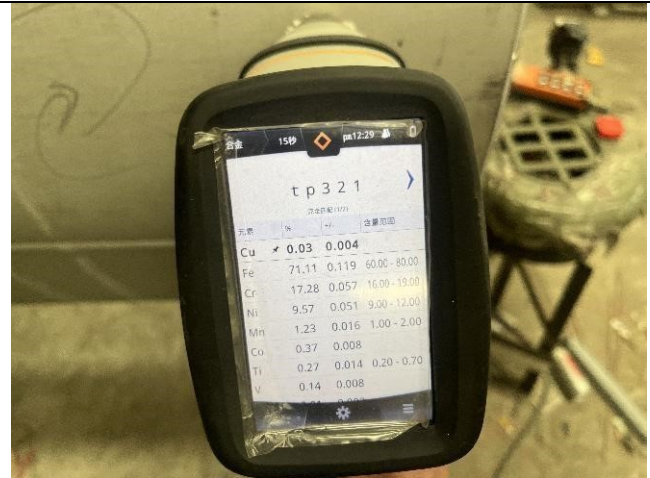
PMI CHECK



PMI CHECK



PMI CHECK



PMI CHECK

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4. ATTACHMENTS: (EACH ATTACHMENT MUST REFERENCE THE CORRESPONDING ATTACHMENT NO., TUV ASSIGNMENT NO., AND CLIENT'S PO NO.)

NONE: NONE

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Inspected by: Zhang Yonglin

Reviewed by: Evan Wen



Date: May 12, 2025

Date: May 12, 2025