

Report No.: IR-IND11018122504007001

Date: Apr 11, 2025

General

TUV COORDINATOR: JESSICA HU	TUV INSPECTOR: ZHANGYONGLIN
WORK ORDER No. (TUV NORD) IND-CUC-C2504007	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 Coupling
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: April 7& April 8, 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

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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 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 checked="" 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 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:

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TUV NORD inspector inspected Coupling, performed quantity, dimension, marking, heat No. visual and color coding inspection verified coupling was in accordance with standard.

3.2) coupling quantity:

description	QTY (PCS)
9-5/8"*11.99, L80-1, BC coupling	200
8-5/8"*6.71, K55, BC coupling SCC	70
10-3/4"*8.89, K55, BC coupling SCC	220
13-3/8"*12.19, K55, BC coupling	30
7" *9.19, K55, BC coupling SCC	100
13-3/8" *12.19, L80-1, BC coupling	290
18-5/8" *15, K55, BC coupling	175

3.3) The Inspection Activities:

1	Threading tolerance checking per item (5%)
2	OD tolerance per item, each end checked 3points (5%)
3	Checking length randomly(5%)
4	Check heat No. for each heat(5%)
5	Quantity checking(100%)
6	Marking checking(5%)
7	Surface checking(5%)
8	Color coding checking(5%)

3.4) The details of inspection activities performed:

3.4.1 Threading tolerance checking per item (5%)

TUV NORD inspector performed threading inspection at randomly 5% for coupling. Detail as follow:

size	13-3/8" K55 BC	taper (in/in)	tooth height(mm)	thread pitch(mm)	thread standoff(mm)
tolerance		0.060-0.067	1.57±0.0254	25.4±0.05	2.54-5.08
actual measured		0.062-0.063	1.57-1.58	25.4	4.5-4.7
size	18-5/8" K55 BC	taper (in/in)	tooth height(mm)	thread pitch(mm)	thread standoff(mm)
tolerance		0.0808-0.0878	1.57±0.0254	25.4±0.08	1.905-4.445
actual measured		0.083-0.084	1.56-1.57	25.4-25.5	3.6-3.9



size	9-5/8" L80-1 BC	taper (in/in)	tooth height(mm)	thread pitch(mm)	thread standoff(mm)
tolerance		0.060-0.067	1.57±0.0254	25.4±0.05	2.54-5.08
actual measured		0.063-0.064	1.57-1.58	25.3-25.4	3.7-4.0
size	13-3/8" L80-1 BC	taper (in/in)	tooth height(mm)	thread pitch(mm)	thread standoff(mm)
tolerance		0.060-0.067	1.57±0.0254	25.4±0.05	2.54-5.08
actual measured		0.063-0.064	1.57-1.58	25.4-25.5	4.2-4.9
size	8-5/8" K55 BC SCC	taper (in/in)	tooth height(mm)	thread pitch(mm)	thread standoff(mm)
tolerance		0.060-0.067	1.57±0.0254	25.4±0.05	2.54-5.08
actual measured		0.063-0.064	1.57-1.58	25.4	4.6-4.7
size	7" K55 BC SCC	taper (in/in)	tooth height(mm)	thread pitch(mm)	thread standoff(mm)
tolerance		0.060-0.067	1.57±0.0254	25.4±0.05	2.54-5.08
actual measured		0.062-0.063	1.57-1.58	25.4-25.5	4.3-4.5
size	10-3/4" K55 BC SCC	taper (in/in)	tooth height(mm)	thread pitch(mm)	thread standoff(mm)
tolerance		0.060-0.067	1.57±0.0254	25.4±0.05	2.54-5.08
actual measured		0.063-0.064	1.56-1.57	25.4-25.5	3.6-4.2

The results of the threading inspection was acceptable.

3.4.2 Coupling OD checking per item (5%)

TUV NORD inspector performed OD inspection at randomly 5% for coupling. Detail as follow:

size	13-3/8" K55 BC	OD (mm)
tolerance		365.12±3.18
actual measured		365.1-365.2
size	18-5/8" K55 BC	OD (mm)



tolerance		508±3.18
actual measured		508.4-508.6
size	9-5/8" L80-1 BC	OD (mm)
tolerance		269.88±2.7
actual measured		269.8-269.9
size	13-3/8" L80-1 BC	OD (mm)
tolerance		365.12±3.18
actual measured		365.0-365.3
size	8-5/8" K55 BC	OD (mm)
tolerance		231.78 (+0.79, -0.40)
actual measured		232.0-232.1
size	7" K55 BC	OD (mm)
tolerance		187.32 (+0.79, -0.40)
actual measured		187.6-187.7
size	10-3/4" K55 BC	OD (mm)
tolerance		286.75 (+0.79, -0.40)
actual measured		286.0-286.1

The results of the OD inspection was acceptable.

3.4.3 Coupling Length checking per item (5%)

TUV NORD inspector performed length inspection at randomly 5% for coupling. Detail as follow:

size	13-3/8" K55 BC	Length
tolerance		≥269.88
actual measured		271.2-271.3



size	18-5/8" K55 BC	Length
tolerance		≥ 269.88
actual measured		271.5-271.6
size	9-5/8" L80-1 BC	Length
tolerance		≥ 269.88
actual measured		271.4-271.5
size	13-3/8" L80-1 BC	Length
tolerance		≥ 269.88
actual measured		271.3-271.4
size	8-5/8" K55 BC	Length
tolerance		≥ 269.88
actual measured		271.6-271.7
size	7" K55 BC	Length
tolerance		≥ 254
actual measured		255.4-255.5
size	10-3/4" K55 BC	Length
tolerance		≥ 269.88
actual measured		271.6-271.7

Unit: mm

The results of the length inspection was acceptable.

3.4.4 Coupling heat No. checking per item (5%)

TUV NORD inspector performed heat No. inspection at randomly 5% for coupling. Detail as follow:

description	heat No.
9-5/8"*11.99, L80-1, BC coupling	24B09523
8-5/8"*6.71, K55, BC coupling	24B06632
10-3/4"*8.89, K55, BC coupling	0221108421

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13-3/8" *12.19, K55, BC coupling	24608812
7" *9.19, K55, BC coupling	24B12992
13-3/8" *12.19, L80-1, BC coupling	24607817
18-5/8" *15, K55, BC coupling	A24080222

3.4.5 Coupling quantity checking per item (100%)

TUV NORD inspector performed quantity inspection at 100% for coupling. Detail as follow:

Description	Po quantity pcs	Actual quantity
9-5/8" *11.99, L80-1, BC coupling	200	200
8-5/8" *6.71, K55, BC coupling	70	70
10-3/4" *8.89, K55, BC coupling	220	220
13-3/8" *12.19, K55, BC coupling	30	30
7" *9.19, K55, BC coupling	100	100
13-3/8" *12.19, L80-1, BC coupling	290	290
18-5/8" *15, K55, BC coupling	175	175

The results of the quantity inspection was acceptable.

3.4.6 Marking checking (10%)

TUV NORD inspector checked the marking at 5% on coupling the details as below:

Every item have one Heat No.

- 1.RT API 5CT-1425 API logo 03-25 7 K BC 24B12992 K250128104 0016
- 2.RT API 5CT-1425 API logo 03-25 13-3/8 K BC 24608812 2412410162-2412A20044 0001
- 3.RT API 5CT-1425 API logo 03-25 18-5/8 K BC A24080222 91001 0127
- 4.RT API 5CT-1425 API logo 03-25 10-3/4 K BC 0221108421 2502N26014 0138
- 5.RT API 5CT-1425 API logo 03-25 8-5/8 K BC 24B06632 R241022302 0041
- 6.RT API 5CT-1425 API logo 03-25 9-5/8 L BC 24B09523 R240915202 0085
- 7.RT API 5CT-1425 API logo 03-25 L BC 13-3/8 24607817 2412411062-2502A20151 0256

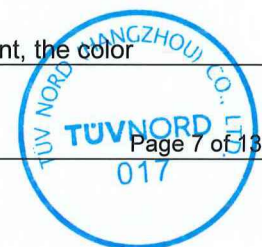
The result was acceptable according the standard requirement.

3.4.7 Surface checking (5%)

TUV inspector checked coupling visual at randomly 5%, during inspection there have no obvious defects was found, such as dents, scratches, or other defects, the results of the surface checking was acceptable.

3.4.8 Color coding checking (5%)

TUV inspector checked color coding at randomly 5%, according the standard requirement, the color



coding was in right color, the results of the color coding 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 coupling were in accordance with API 5B and API 5CT requirement. The check result was satisfactory.

3.6) Pictures taken during visit:



QUANTITY CHECK



QUANTITY CHECK



QUANTITY CHECK



QUANTITY CHECK





QUANTITY CHECK



QUANTITY CHECK



VISUAL AND MARKING CHECK



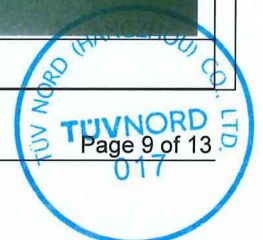
VISUAL AND MARKING CHECK



VISUAL AND MARKING CHECK



VISUAL AND MARKING CHECK





VISUAL AND MARKING CHECK



VISUAL AND MARKING CHECK



VISUAL AND MARKING CHECK



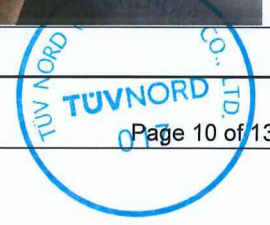
VISUAL AND MARKING CHECK



VISUAL AND MARKING CHECK



VISUAL AND MARKING CHECK





DIMENSION CHECK



DIMENSION CHECK



DIMENSION CHECK



DIMENSION CHECK



DIMENSION CHECK

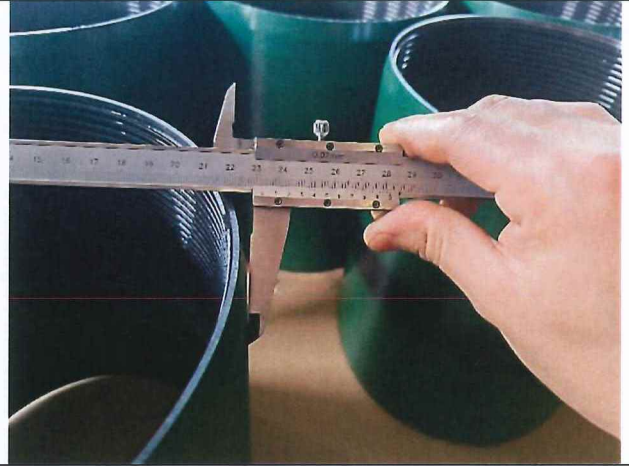


DIMENSION CHECK





DIMENSION CHECK



DIMENSION CHECK



DIMENSION CHECK




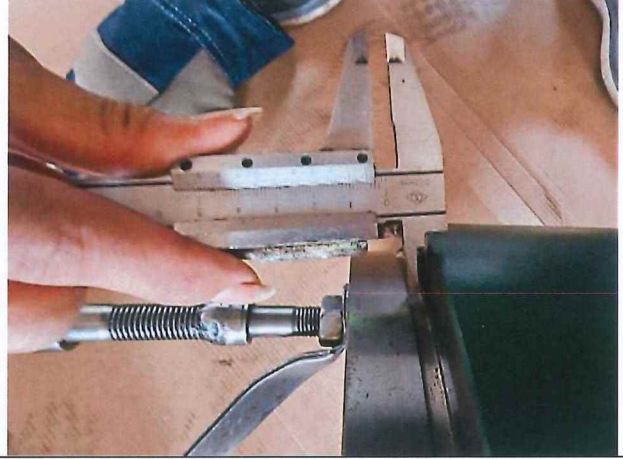
DIMENSION CHECK



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DIMENSION CHECK

		
<p>DIMENSION CHECK</p>	<p>DIMENSION CHECK</p>	
<p>4. ATTACHMENTS: (EACH ATTACHMENT MUST REFERENCE THE CORRESPONDING ATTACHMENT NO., TUV ASSIGNMENT NO., AND CLIENT'S PO NO.)</p>		
<p>NONE: NONE</p>		

Inspected by: Zhang Yonglin

Zhang Yonglin

Date: April 11, 2025

Reviewed by: Evan Wen



Date: April 11, 2025