C&W International Fabricators

REPORT INDEX

Purchase Order: ET2022301-4
Quantity: 18 EA
Shipment No.:
Shipment Date:

C&W International Fabricators

METALLURGICAL TEST CERTIFICATE

Serial No.:	ET2022301-4-19...36	PO# :	ET2022301	Date:	2023-03-10
Part No:	ST715	API Monogram:	YES	Report#:	2023031001
Specification:	API Spec 6A/ASTM A370	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16" 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

TEST CONDITION

Test Bar Size:	QTC, 4" x 4" x 8"	Bar Di:	12.7 mm (0.5")
Melt Practice	EF + LF + VD	Reduction Ratio Min:	5:1
Yield Stress	0.2% offset	Gauge Length	50.8mm

CHEMICAL COMPOSITION

Mill No.:	Qty	Test No.	C	Mn	Si	S	P	Ni	Cu	Mo	Cr	V
Spec Min			0.28	0.40	0.15	/	/	/	/	0.15	0.80	/
Spec Max			0.33	0.60	0.35	0.025	0.025	0.50	0.35	0.25	1.10	0.30
2087148Z	14	1	0.300	0.540	0.260	0.005	0.011	0.050	0.060	0.160	1.060	0.006

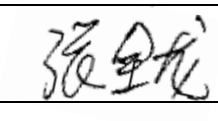
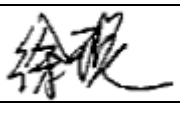
MECHANICAL COMPOSITION

Heat Lot No.	QTY.	Test No.	Yield Strength (KPsi)	Tensile Strength (KPsi)	Elongation%	Reduction of Area%	Hardness HB	10mm×10mm ChARPY J(ft.lb) At-46° c	Minimum Lateral	Shear Fraction
Spec Min			75K	95K	18.0	35.0	197	27J		
Spec Max			/	/	/	/	235	/		
TM2303020201	7	1	77.5K	96.8K	24.0	54.5	222	39;48;57		
TM2303030301	5	2	78.0K	97.5K	27.0	56.0	212	47;55;61		
TM2303040201	6	3	79.5K	98.5K	25.0	55.2	222	66;71;76		

HEAT TREATMENT

Forgings:	5:1	Test Bar(OTC)	
Normalized:	900℃ 6 HRS	Normalized:	900℃ 6 HRS
Austenitized:	860℃ 6 HRS	Austenitized:	860℃ 6 HRS
Quenchant:	Water	Quenchant:	Water
Start Temp:	27 ℃	Start Temp:	27 ℃
End Temp:	42 ℃	End Temp:	42 ℃
Temper:	660℃ 9 HRS AIR	Temper:	660℃ 9 HRS AIR

We hereby certify that all test results and procedure information contained herein are correct and true as in contained the records of the company and also no welding or weld repair was performed on subject parts.

Inspected by:		Approved by:	

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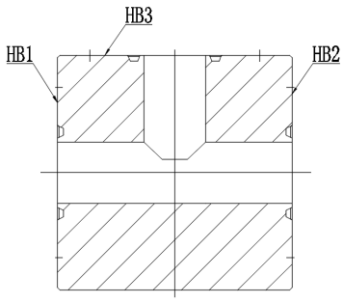
Hardness Test Report

Serial No.:	ET2022301-4-19...36	PO# :	ET2022301	Date:	2023-03-10
Part No:	ST715	API Monogram:	YES	Report#:	2023031001
Specification:	API Spec 6A/ASTM E10	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

Item	S/N	Heat Lot No.	HB1	HB2	HB3	HB4	HB5	HB6	HB7	HB8
1	ET2022301-4-19	TM2303020201	212	215	212					
2	ET2022301-4-20	TM2303020201	217	221	217					
3	ET2022301-4-21	TM2303020201	221	223	221					
4	ET2022301-4-22	TM2303020201	212	207	210					
5	ET2022301-4-23	TM2303020201	215	212	212					
6	ET2022301-4-24	TM2303020201	217	215	212					
7	ET2022301-4-25	TM2303020201	215	217	215					
8	ET2022301-4-26	TM2303030301	223	221	223					
9	ET2022301-4-27	TM2303030301	217	212	215					
10	ET2022301-4-28	TM2303030301	212	210	207					
11	ET2022301-4-29	TM2303030301	215	212	212					
12	ET2022301-4-30	TM2303030301	221	217	221					
13	ET2022301-4-31	TM2303040201	207	212	210					
14	ET2022301-4-32	TM2303040201	217	215	212					
15	ET2022301-4-33	TM2303040201	212	217	215					
16	ET2022301-4-34	TM2303040201	221	223	221					
17	ET2022301-4-35	TM2303040201	217	212	215					
18	ET2022301-4-36	TM2303040201	223	221	223					

Sketch:



Method Used:	Impact Energy:3000Kg. Diameter of steel ball:10mm		
Acceptable Hardness	197HBW-235HBW	Inspected by:	Approved by:
Judgments:	[V] Conform	刘永友	徐
	[ ] Do not conform		

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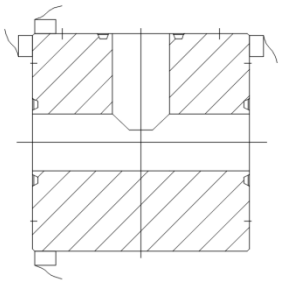
ULTRASONIC EXAMINATION REPORT

Serial No.:	ET2022301-4-19...36	PO# :	ET2022301	Date:	2023-03-10
Part No:	ST715	API Monogram:	YES	Report#:	2023031001
Specification:	API Spec 6A/ASTM A388	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-4-19	TM2303020201	Acceptable				
2	ET2022301-4-20	TM2303020201	Acceptable				
3	ET2022301-4-21	TM2303020201	Acceptable				
4	ET2022301-4-22	TM2303020201	Acceptable				
5	ET2022301-4-23	TM2303020201	Acceptable				
6	ET2022301-4-24	TM2303020201	Acceptable				
7	ET2022301-4-25	TM2303020201	Acceptable				
8	ET2022301-4-26	TM2303030301	Acceptable				
9	ET2022301-4-27	TM2303030301	Acceptable				
10	ET2022301-4-28	TM2303030301	Acceptable				
11	ET2022301-4-29	TM2303030301	Acceptable				
12	ET2022301-4-30	TM2303030301	Acceptable				
13	ET2022301-4-31	TM2303040201	Acceptable				
14	ET2022301-4-32	TM2303040201	Acceptable				
15	ET2022301-4-33	TM2303040201	Acceptable				
16	ET2022301-4-34	TM2303040201	Acceptable				
17	ET2022301-4-35	TM2303040201	Acceptable				
18	ET2022301-4-36	TM2303040201	Acceptable				

Sketch:



ABOVE FORGED ARE ULTRASONICALLY TESTED FOR INTERNAL DEFECTS USSING FLAT-BOTTOM HOLE PROCEDURE;
NO RECORDABLE INDICATION OBSERVED DURING THE TEST. HENCE ACCEPTABLE AS PER STANDARD.

UT Code:ASTM A388	Technique:Straight/Contact	Examined BY:	Approved by:
Exam. Stage: After heat treatment	Calibration Block:CSK IA		
Equipment:CTS-2020	Couplant: OIL		
Probe Used :2.5P Φ10	Acceptance Criteria: API 6A PSL 3		
Equipment Calibration Date :2022.09.10	Test Gain:20db + 5 db	Level as per UT II	Level as per UT II
Equipment Due Date: 2023.09.09			

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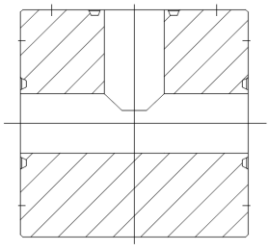
Magnetic Particle Inspection Report

Serial No.:	ET2022301-4-19...36	PO# :	ET2022301	Date:	2023-03-10
Part No:	ST715	API Monogram:	YES	Report#:	2023031001
Specification:	API Spec 6A/ASTM E709	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-4-19	TM2303020201	Acceptable				
2	ET2022301-4-20	TM2303020201	Acceptable				
3	ET2022301-4-21	TM2303020201	Acceptable				
4	ET2022301-4-22	TM2303020201	Acceptable				
5	ET2022301-4-23	TM2303020201	Acceptable				
6	ET2022301-4-24	TM2303020201	Acceptable				
7	ET2022301-4-25	TM2303020201	Acceptable				
8	ET2022301-4-26	TM2303030301	Acceptable				
9	ET2022301-4-27	TM2303030301	Acceptable				
10	ET2022301-4-28	TM2303030301	Acceptable				
11	ET2022301-4-29	TM2303030301	Acceptable				
12	ET2022301-4-30	TM2303030301	Acceptable				
13	ET2022301-4-31	TM2303040201	Acceptable				
14	ET2022301-4-32	TM2303040201	Acceptable				
15	ET2022301-4-33	TM2303040201	Acceptable				
16	ET2022301-4-34	TM2303040201	Acceptable				
17	ET2022301-4-35	TM2303040201	Acceptable				
18	ET2022301-4-36	TM2303040201	Acceptable				

Sketch/Inspection Coverage:



Fluorescent magnetic particle inspection was performed on all accessible wetted/sealing surface with acceptable results

Evaluation & Disposition : Found to be satisfactory.

Equipment	CJD-9000	MT Code	ASTM E709	Examined	Approved
Test Method	Fulcrum [ ] Cablel [√]	Particle Type	Fluorescence Wet	BY: Level as per MT Ⅱ	by: Level as per MT Ⅱ
Exam.Stage	Rough After Ra ≦ 6.3μm	Test Piece	A1-30/100		
Magnetizing time	1-3S	Circular AMPS/Turns	900A/1		
Concentration	0.3ml/100ml	UV-Light Intensity	≥1000Uw/C ㎡		

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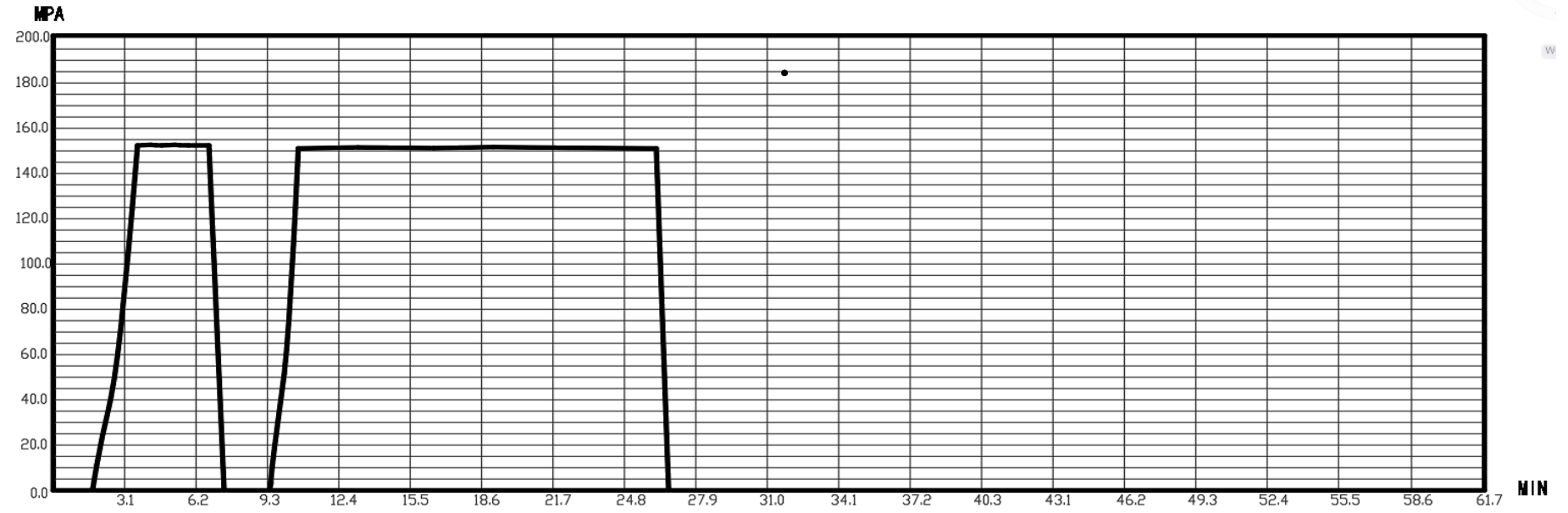
HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-19	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.9MPa	HOLDINGPERIOD 3	Acceptable	Start Time	09：01：05
BODY TEST	155.7MPa	HOLDINGPERIOD 15	Acceptable	End Time	09：26：33



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

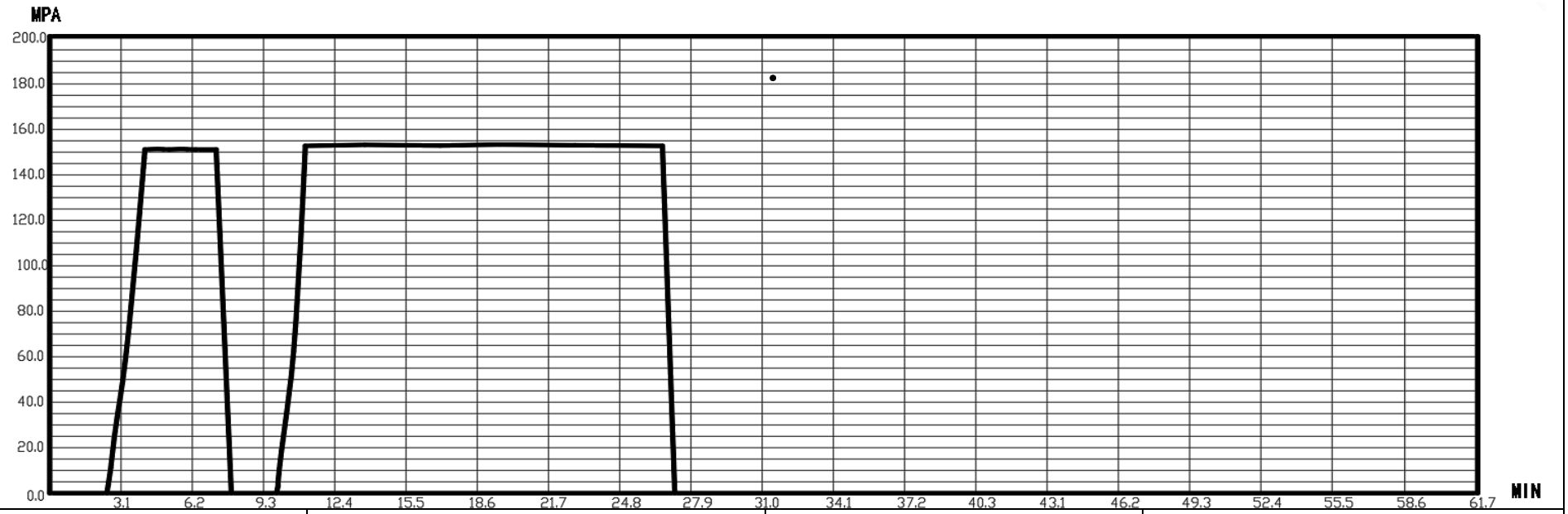
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-20	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.8MPa	HOLDINGPERIOD 3	Acceptable	Start Time	09: 58: 25
BODY TEST	155.5MPa	HOLDINGPERIOD 15	Acceptable	End Time	10: 23: 54



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

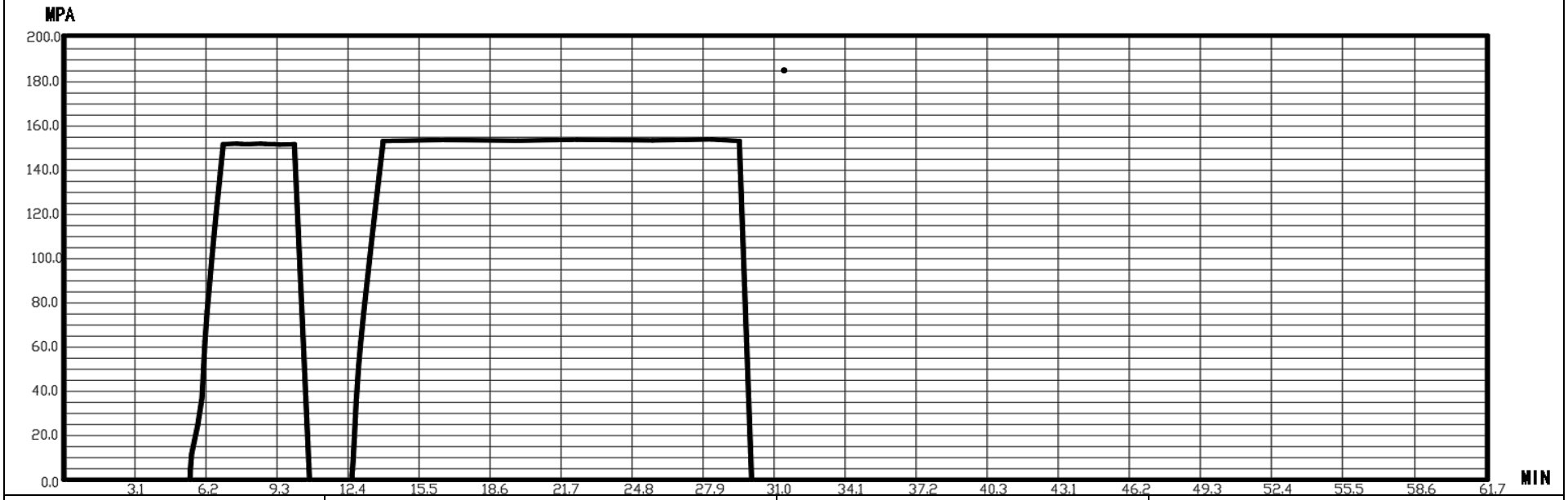
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-21	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.8MPa	HOLDINGPERIOD 3	Acceptable	Start Time	10: 38: 42
BODY TEST	155.7MPa	HOLDINGPERIOD 15	Acceptable	End Time	11: 03: 58



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

No visible leakage shall occur each holding period

Checker: 宋宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-22	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.9MPa	HOLDINGPERIOD 3	Acceptable	Start Time	13：22：20
BODY TEST	155.7MPa	HOLDINGPERIOD 15	Acceptable	End Time	13：47：41

Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

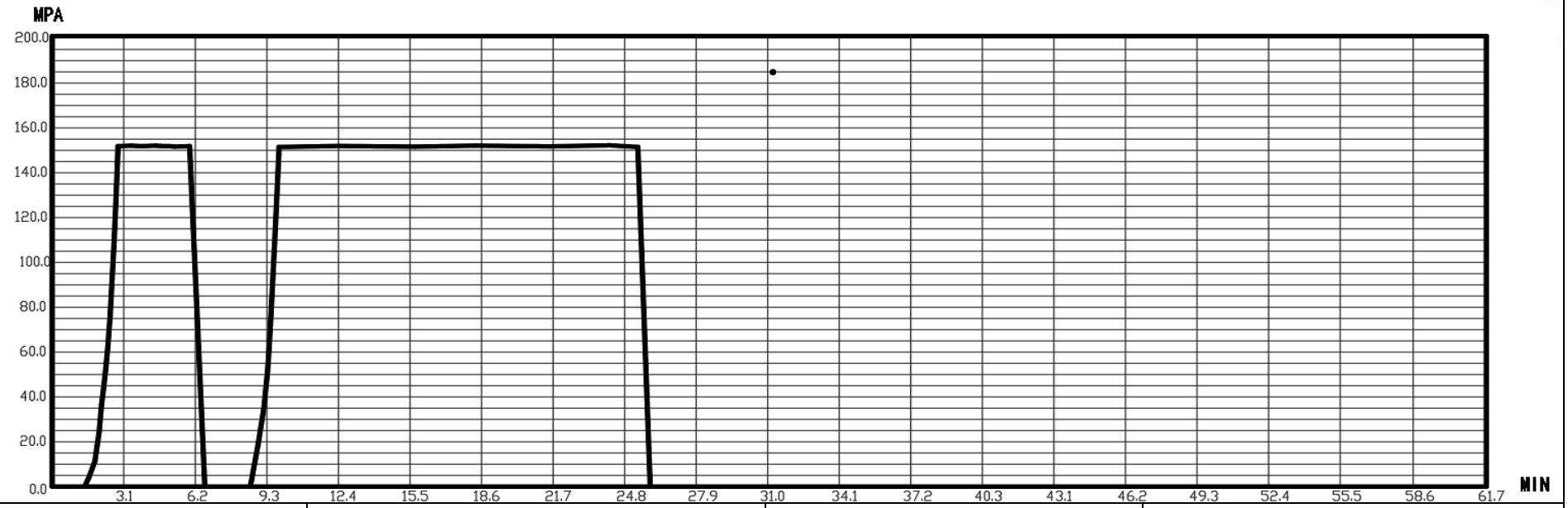
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-23	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.7MPa	HOLDINGPERIOD 3	Acceptable	Start Time	14: 08: 02
BODY TEST	155.6MPa	HOLDINGPERIOD 15	Acceptable	End Time	14: 33: 25



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

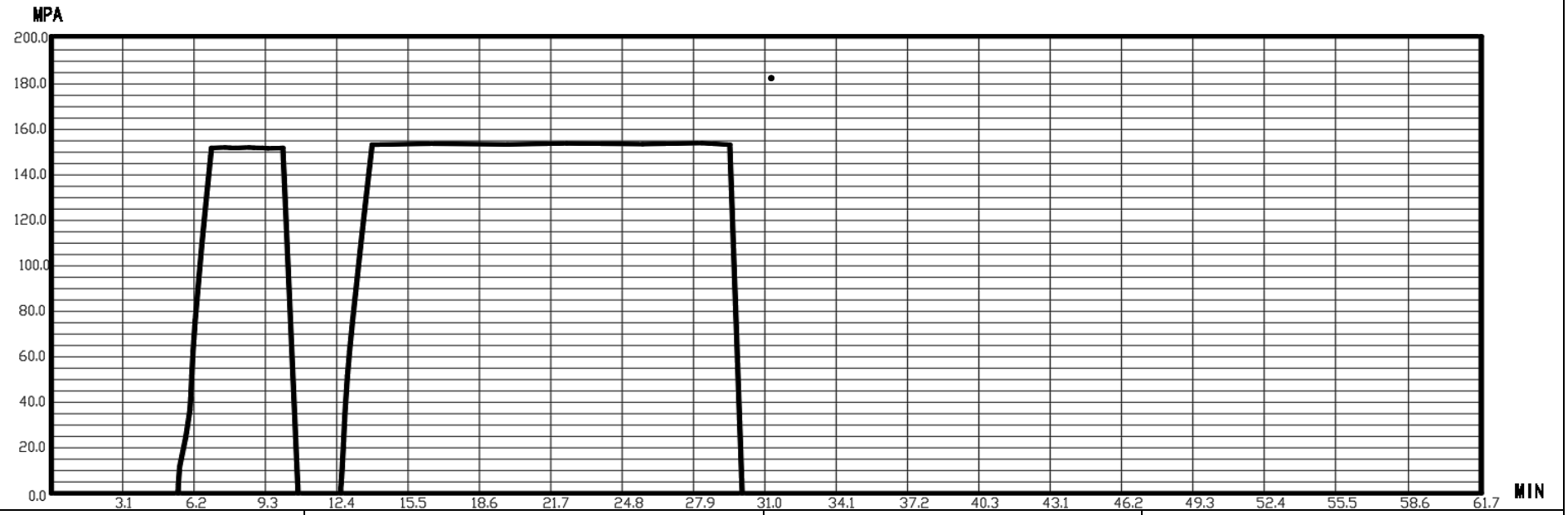
No visible leakage shall occur each holding period

Checker: 宋宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-24	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.9MPa	HOLDINGPERIOD 3	Acceptable	Start Time	14: 57: 29
BODY TEST	155.7MPa	HOLDINGPERIOD 15	Acceptable	End Time	15: 22: 37



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

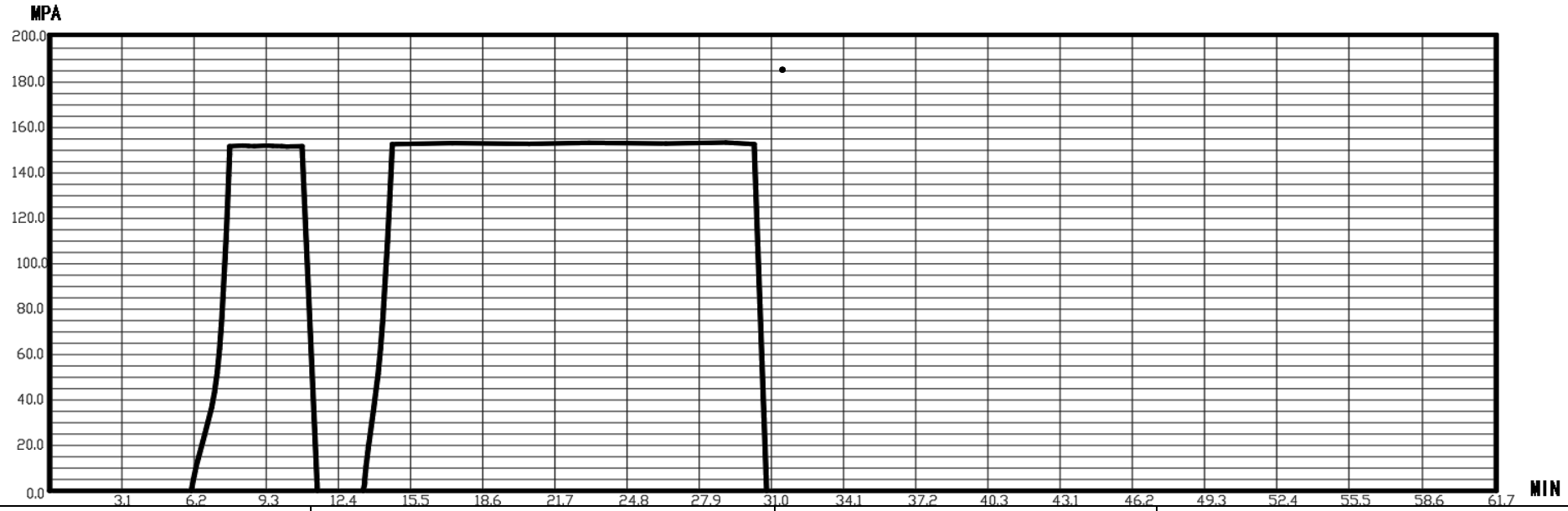
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-25	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.5MPa	HOLDINGPERIOD 3	Acceptable	Start Time	15：52：40
BODY TEST	155.8MPa	HOLDINGPERIOD 15	Acceptable	End Time	16：17：58



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

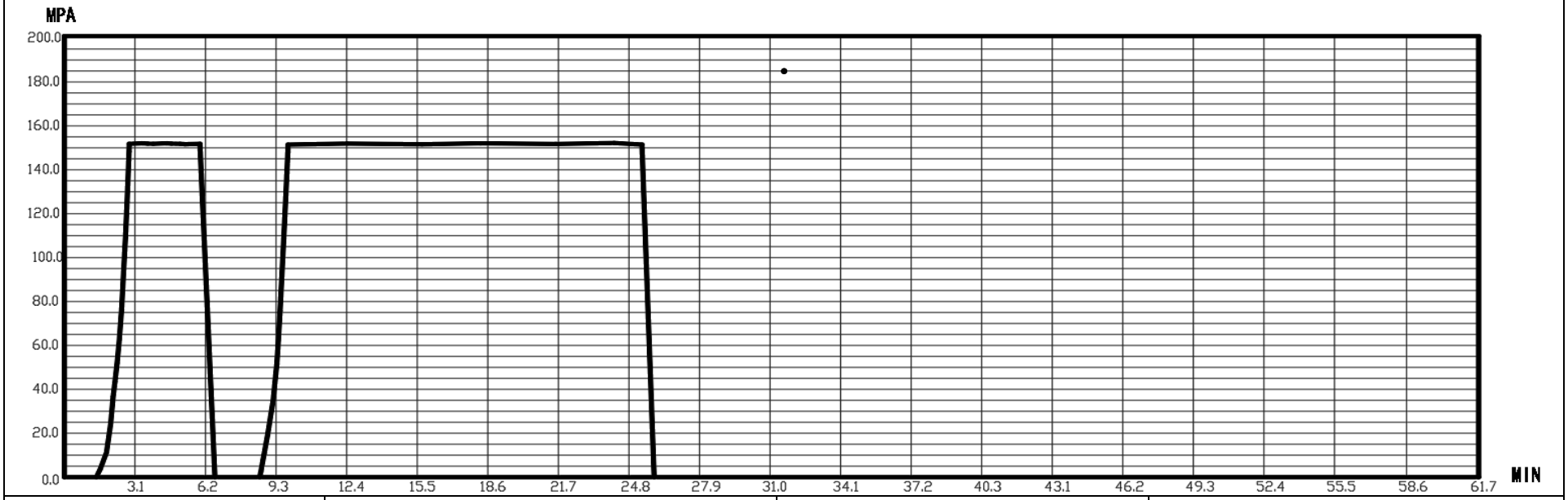
No visible leakage shall occur each holding period

Checker: 宋宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-26	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.8MPa	HOLDINGPERIOD 3	Acceptable	Start Time	16: 46: 22
BODY TEST	155.7MPa	HOLDINGPERIOD 15	Acceptable	End Time	17: 11: 49



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

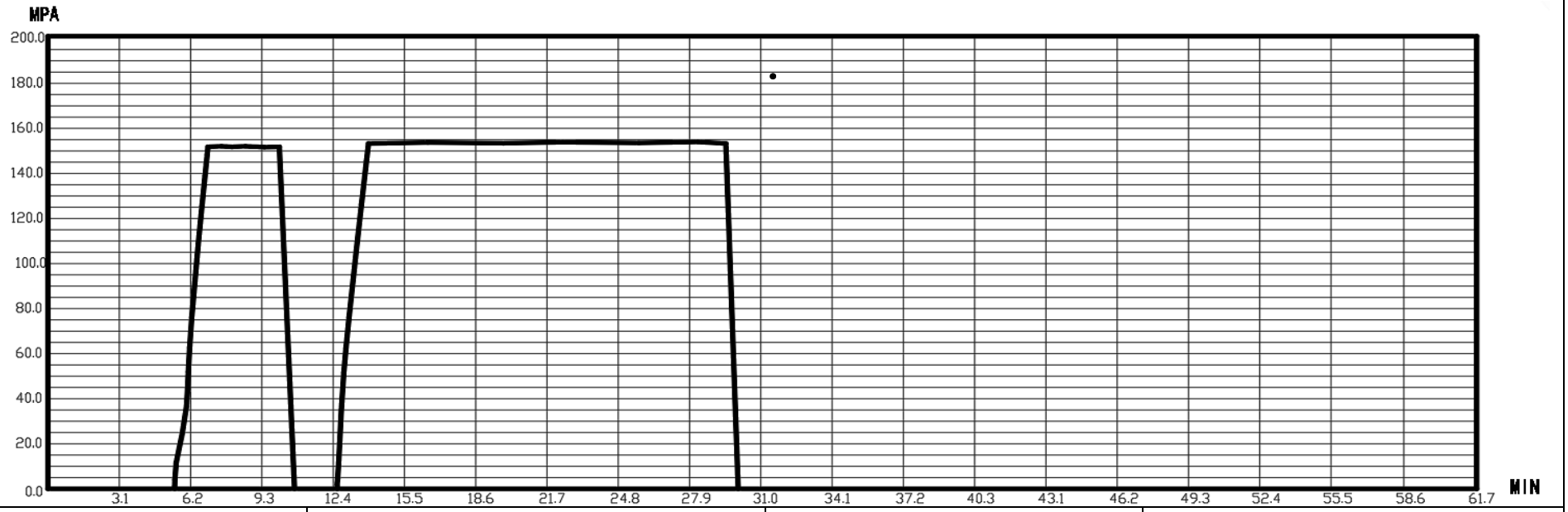
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-27	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.11
BODY TEST	155.8MPa	HOLDINGPERIOD 3	Acceptable	Start Time	18: 13: 30
BODY TEST	155.6MPa	HOLDINGPERIOD 15	Acceptable	End Time	18: 38: 52



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

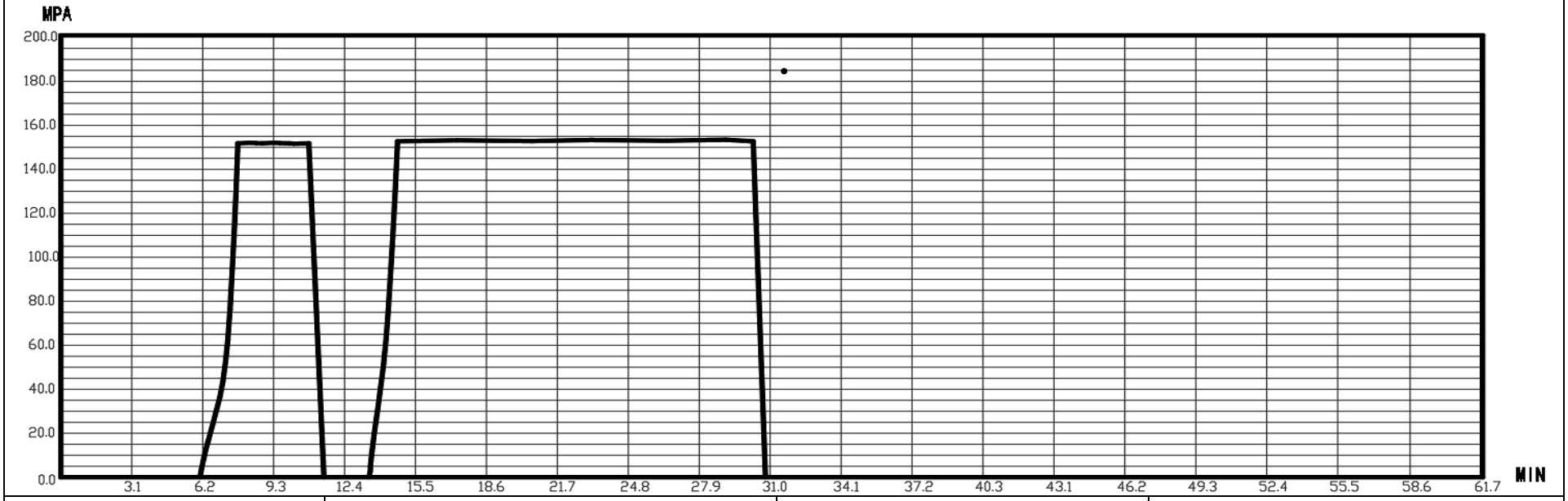
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.11

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-28	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.5MPa	HOLDINGPERIOD 3	Acceptable	Start Time	08: 02: 20
BODY TEST	155.8MPa	HOLDINGPERIOD 15	Acceptable	End Time	08: 27: 33



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

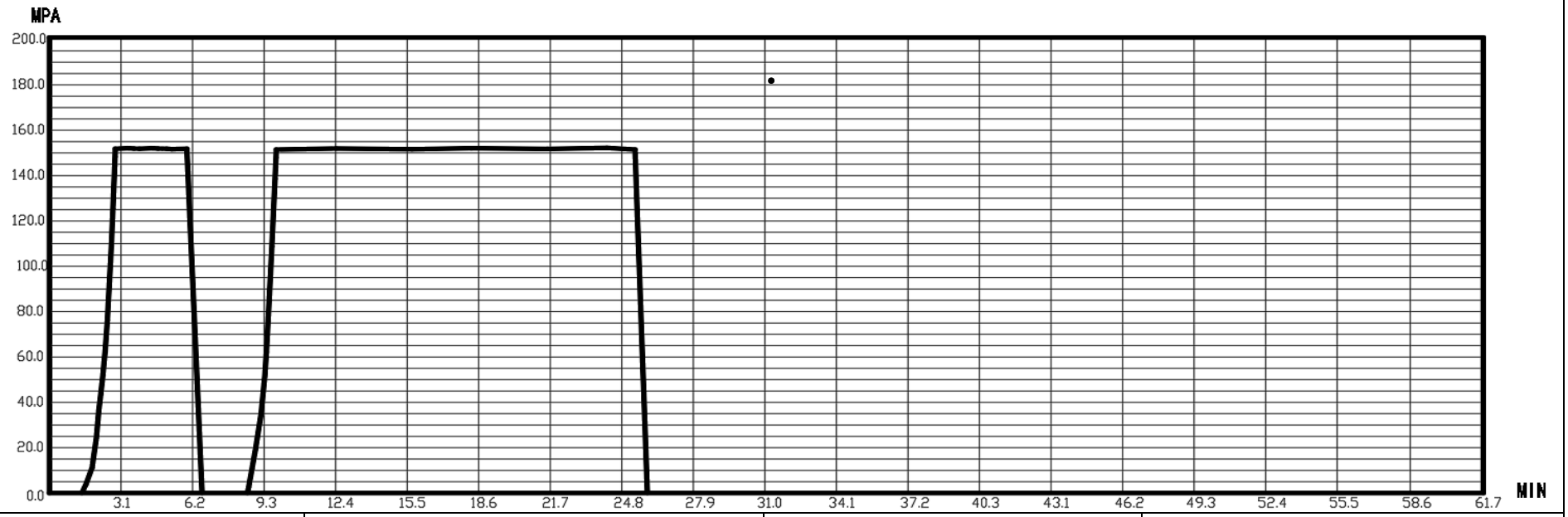
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-29	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.6MPa	HOLDINGPERIOD 3	Acceptable	Start Time	09：09：40
BODY TEST	155.7MPa	HOLDINGPERIOD 15	Acceptable	End Time	09：34：57



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

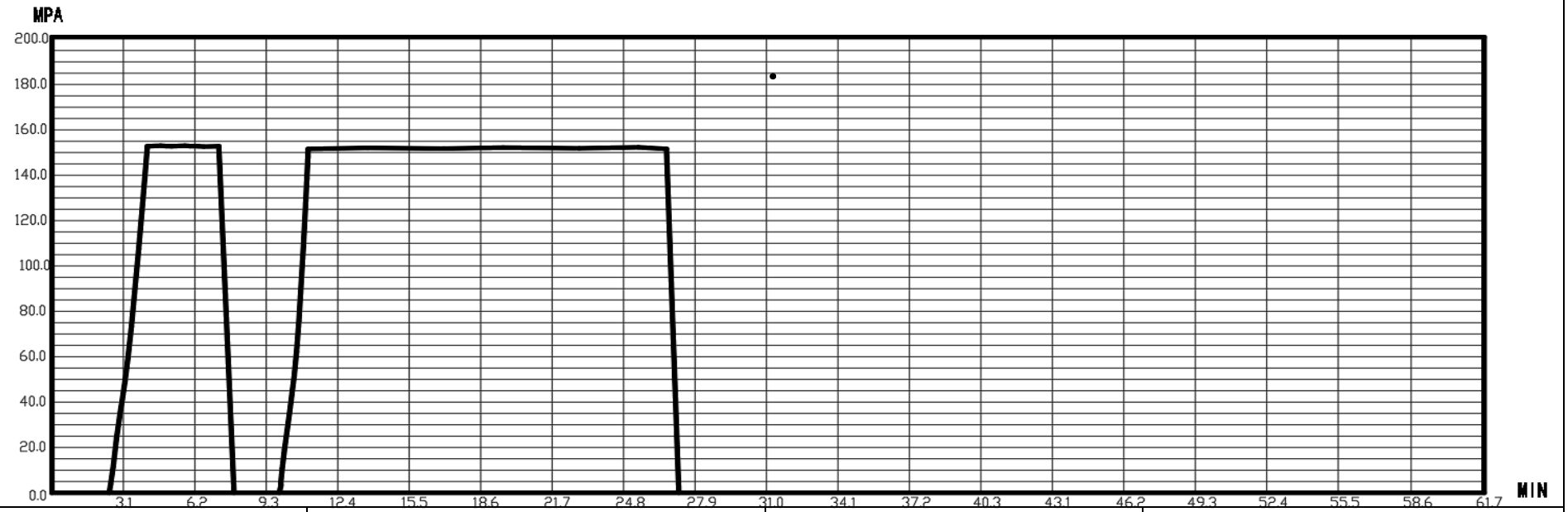
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-30	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.5MPa	HOLDINGPERIOD 3	Acceptable	Start Time	09：55：05
BODY TEST	155.5MPa	HOLDINGPERIOD 15	Acceptable	End Time	10：20：22



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

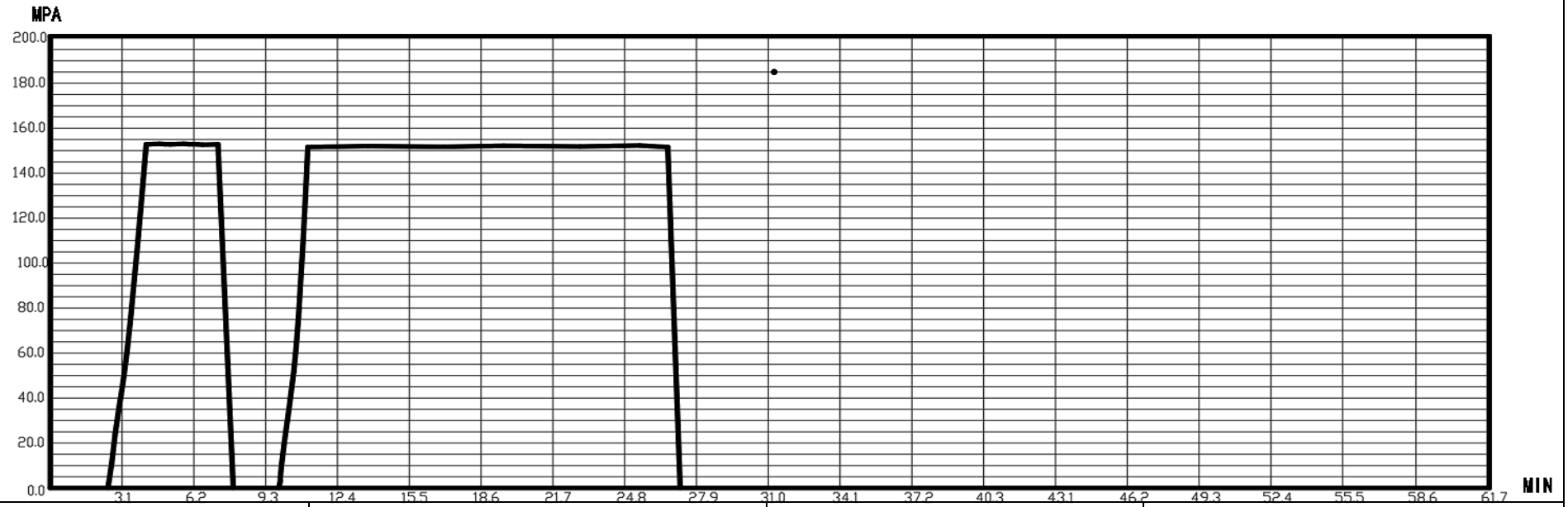
No visible leakage shall occur each holding period

Checker: 宋宏宇 Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-31	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.6MPa	HOLDINGPERIOD 3	Acceptable	Start Time	10: 39: 28
BODY TEST	155.8MPa	HOLDINGPERIOD 15	Acceptable	End Time	11: 04: 42



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

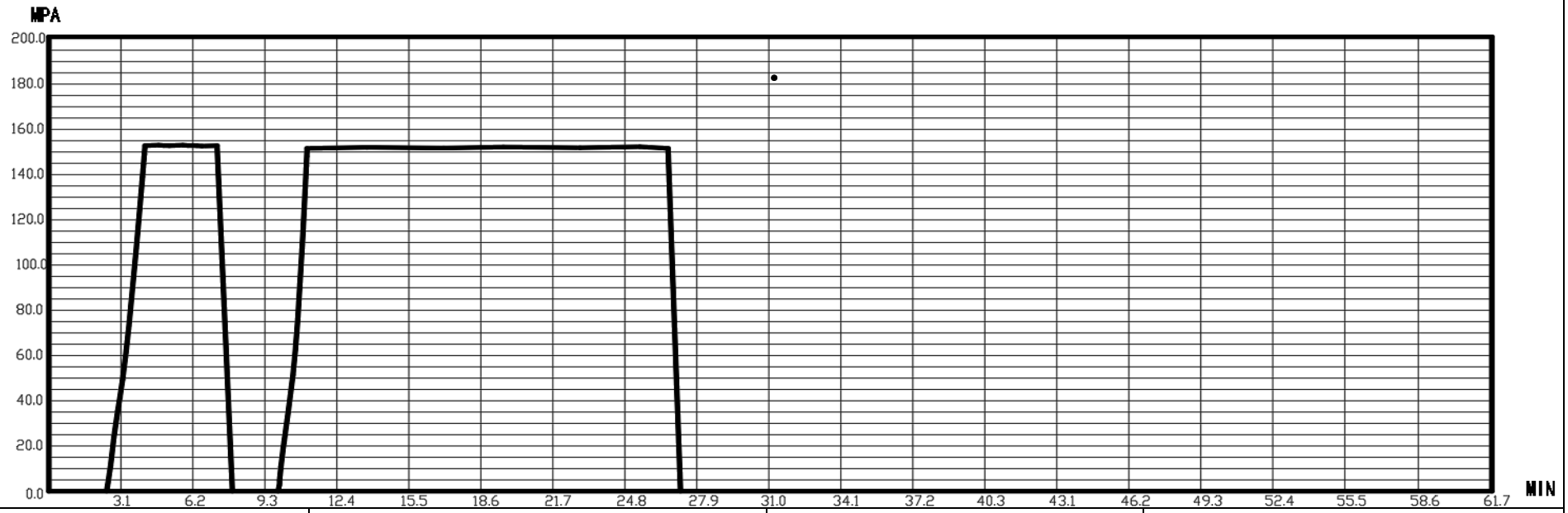
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-32	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.5MPa	HOLDINGPERIOD 3	Acceptable	Start Time	13: 23: 32
BODY TEST	155.8MPa	HOLDINGPERIOD 15	Acceptable	End Time	13: 48: 51



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

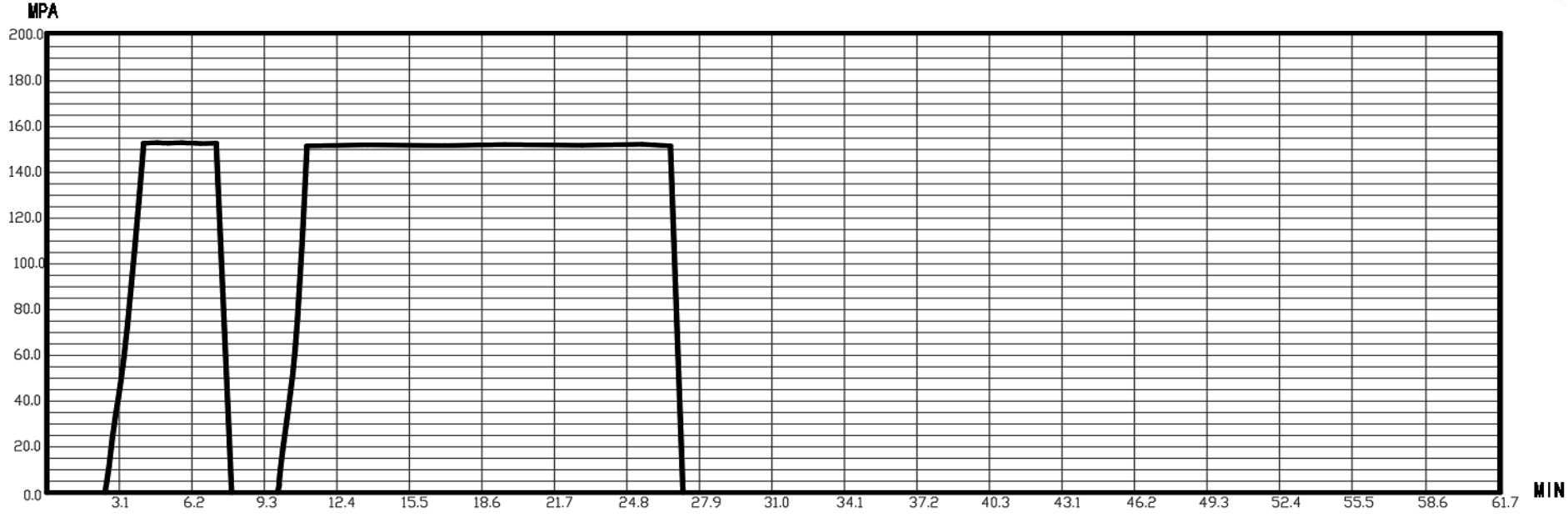
No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-33	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.6MPa	HOLDINGPERIOD 3	Acceptable	Start Time	14：17：24
BODY TEST	155.9MPa	HOLDINGPERIOD 15	Acceptable	End Time	14：42：48



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

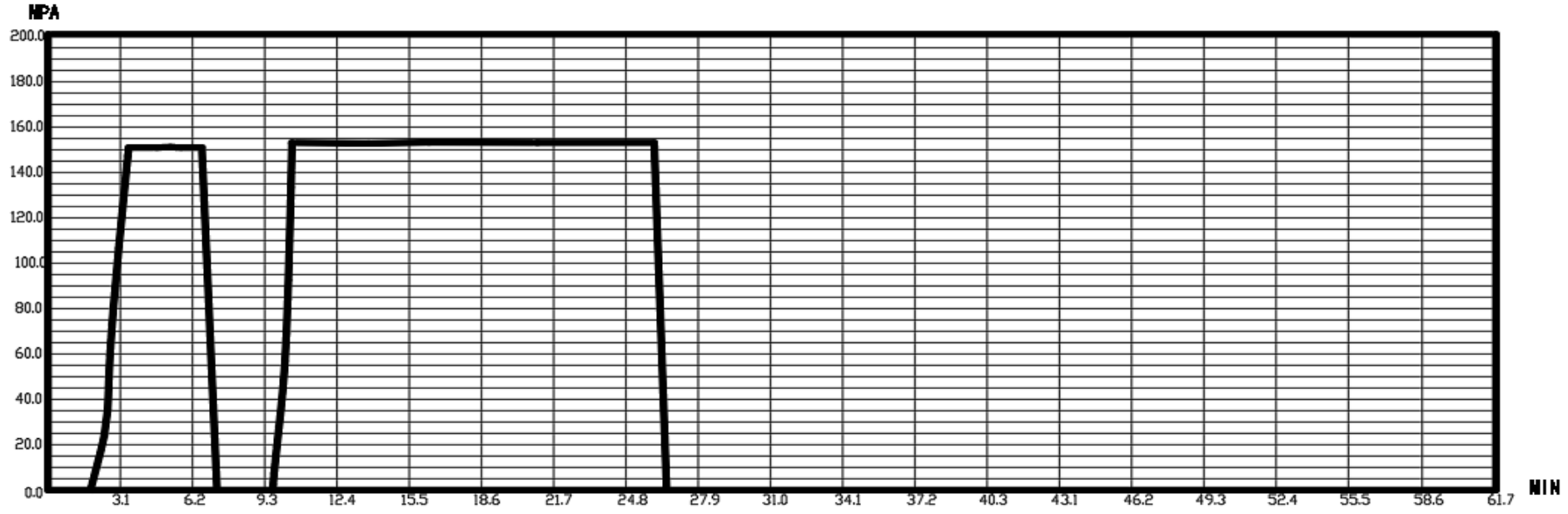
No visible leakage shall occur each holding period

Checker: _____ Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-34	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.5MPa	HOLDINGPERIOD 3	Acceptable	Start Time	14: 52: 31
BODY TEST	155.5MPa	HOLDINGPERIOD 15	Acceptable	End Time	15: 17: 58



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

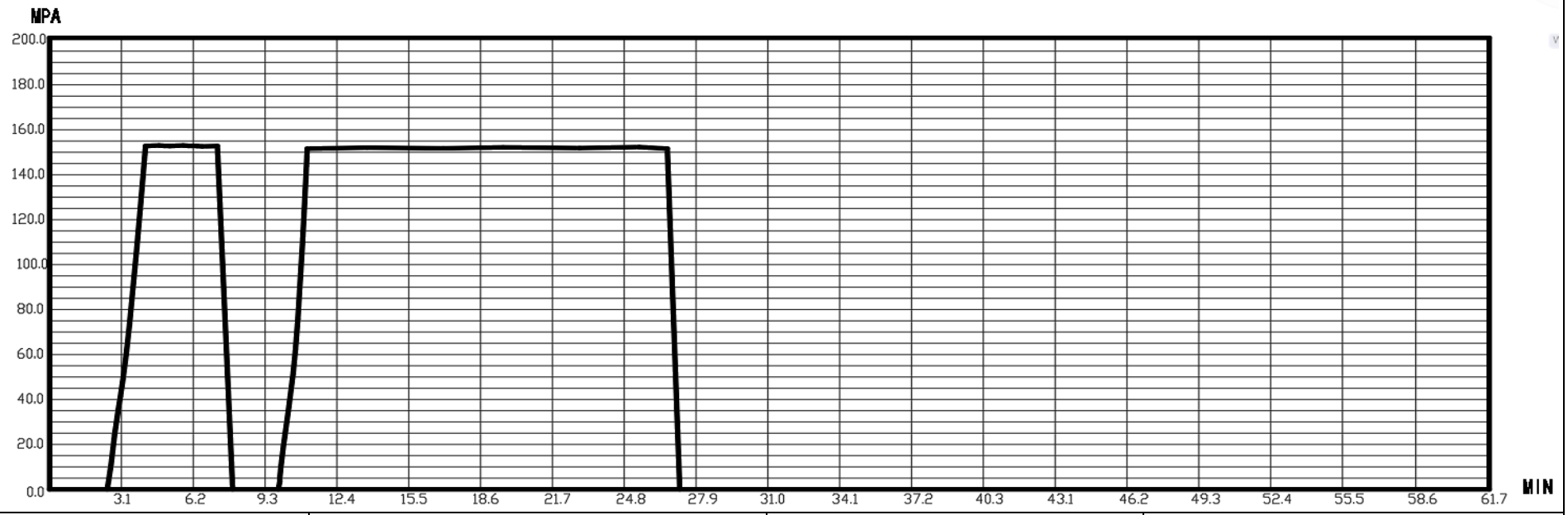
No visible leakage shall occur each holding period

Checker: _____ Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-35	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.7MPa	HOLDINGPERIOD 3	Acceptable	Start Time	15：46：15
BODY TEST	155.6MPa	HOLDINGPERIOD 15	Acceptable	End Time	16：11：39



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

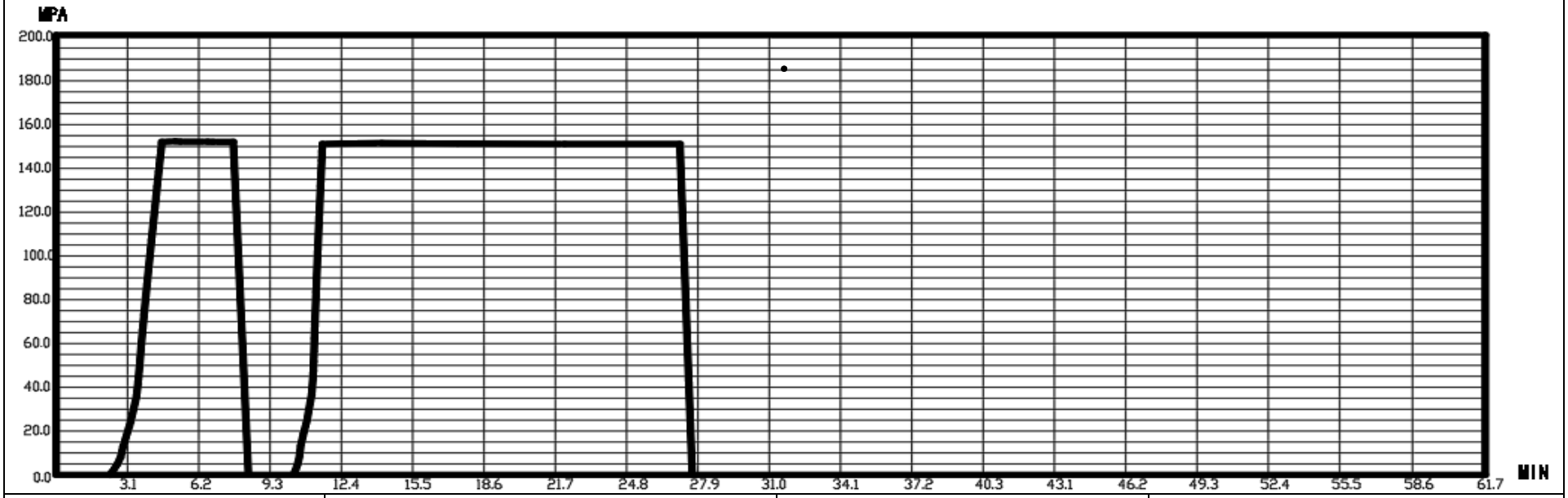
No visible leakage shall occur each holding period

Checker: 宋宏宇 Date: 2023.03.12

C&W International Fabricators

HYDRASTATIC TEST REPORT

Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1		Serial NO.:	ET2022301-4-36	
Item	Pressure(Mpa)	Method (Min)	Result	Date:	2023.03.12
BODY TEST	155.8MPa	HOLDINGPERIOD 3	Acceptable	Start Time	16：39：29
BODY TEST	155.6MPa	HOLDINGPERIOD 15	Acceptable	End Time	17：04：42



Gage SN:	TTA-032	Test Spec:	API6A/PSL3
Test Medium:	Water	Test Temp.:	ROOM

No visible leakage shall occur each holding period

Checker: 朱宏宇 Date: 2023.03.12

C&W International Fabricators

REPORT INDEX

Purchase Order: ET2022301-1
Quantity: 14 EA
Shipment No.:
Shipment Date:

C&W International Fabricators

METALLURGICAL TEST CERTIFICATE

Serial No.:	ET2022301-1-01...14	PO# :	ET2022301	Date:	2023-03-02
Part No:	SC715415	API Monogram:	YES	Report#:	2023030201
Specification:	API Spec 6A/ASTM A370	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16" 15MX4 1/16" 15M EE LU PSL3 PR1			Qty:	14 EA

TEST CONDITION

Test Bar Size:	QTC, 4" x 4" x 8"	Bar Di:	12.7 mm (0.5")
Melt Practice	EF + LF + VD	Reduction Ratio Min:	5:1
Yield Stress	0.2% offset	Gauge Length	50.8mm

CHEMICAL COMPOSITION

Mill No.:	Qty	Test No.	C	Mn	Si	S	P	Ni	Cu	Mo	Cr	V
Spec Min			0.28	0.40	0.15	/	/	/	/	0.15	0.80	/
Spec Max			0.33	0.60	0.35	0.025	0.025	0.50	0.35	0.25	1.10	0.30
2087148Z	14	1	0.300	0.540	0.260	0.005	0.011	0.050	0.060	0.160	1.060	0.006

MECHANICAL COMPOSITION

Heat Lot No.	QTY.	Test No.	Yield Strength (KPsi)	Tensile Strength (KPsi)	Elongation%	Reduction of Area%	Hardness HB	10mm×10mm ChARPY J(ft.lb) At-46° c	Minimum Lateral	Shear Fraction
Spec Min			75K	95K	18.0	35.0	197	27J		
Spec Max			/	/	/	/	235	/		
TM2302030201	8	1	78.5K	98.0K	26.0	52.0	222	51;59;68		
TM2302050301	6	2	79.3K	99.5K	27.5	51.5	218	40;49;60		

HEAT TREATMENT

Forgings:	5:1	Test Bar(OTC)	
Normalized:	900℃ 6 HRS	Normalized:	900℃ 6 HRS
Austenitized:	860℃ 6 HRS	Austenitized:	860℃ 6 HRS
Quenchant:	Water	Quenchant:	Water
Start Temp:	26 ℃	Start Temp:	26 ℃
End Temp:	34 ℃	End Temp:	34 ℃
Temper:	660℃ 9 HRS AIR	Temper:	660℃ 9 HRS AIR

We hereby certify that all test results and procedure information contained herein are correct and true as in contained the records of the company and also no welding or weld repair was performed on subject parts.

Inspected by:		Approved by:	

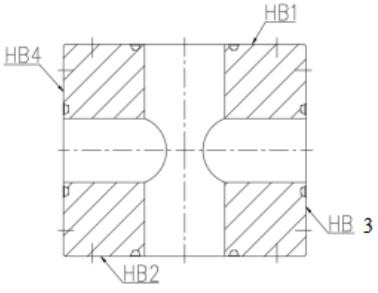
C&W International Fabricators

Hardness Test Report

Serial No.:	ET2022301-1-01...14	PO# :	ET2022301	Date:	2023-03-02
Part No:	SC715415	API Monogram:	YES	Report#:	2023030201
Specification:	API Spec 6A/ASTM E10	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15MX4 1/16″ 15M EE LU PSL3 PR1			Qty:	14 EA

Item	S/N	Heat Lot No.	HB1	HB2	HB3	HB4	HB5	HB6	HB7	HB8
1	ET2022301-1-01	TM2302030201	217	221	217	221				
2	ET2022301-1-02	TM2302030201	221	223	221	223				
3	ET2022301-1-03	TM2302030201	223	225	221	225				
4	ET2022301-1-04	TM2302030201	217	215	217	215				
5	ET2022301-1-05	TM2302030201	221	223	221	223				
6	ET2022301-1-06	TM2302030201	217	215	215	217				
7	ET2022301-1-07	TM2302030201	223	225	221	223				
8	ET2022301-1-08	TM2302030201	225	221	223	221				
9	ET2022301-1-09	TM2302050301	217	221	217	221				
10	ET2022301-1-10	TM2302050301	223	225	221	223				
11	ET2022301-1-11	TM2302050301	217	215	217	221				
12	ET2022301-1-12	TM2302050301	225	223	225	223				
13	ET2022301-1-13	TM2302050301	221	217	221	217				
14	ET2022301-1-14	TM2302050301	223	221	223	221				

Sketch:



Method Used:	Impact Energy:3000Kg. Diameter of steel ball:10mm		
Acceptable Hardness	197HBW-235HBW	Inspected by:	Approved by:
Judgments:	[V] Conform	刘永友	徐
	[ ] Do not conform		

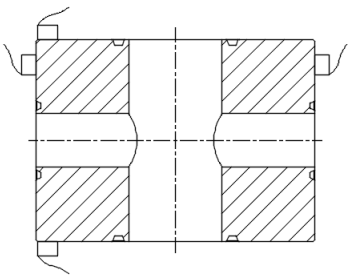
C&W International Fabricators

ULTRASONIC EXAMINATION REPORT

Serial No.:	ET2022301-1-01...14	PO# :	ET2022301	Date:	2023-03-02
Part No:	SC715415	API Monogram:	YES	Report#:	2023030201
Specification:	API Spec 6A/ASTM A388	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15MX4 1/16″ 15M EE LU PSL3 PR1			Qty:	14 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-1-01	TM2302030201	Acceptable				
2	ET2022301-1-02	TM2302030201	Acceptable				
3	ET2022301-1-03	TM2302030201	Acceptable				
4	ET2022301-1-04	TM2302030201	Acceptable				
5	ET2022301-1-05	TM2302030201	Acceptable				
6	ET2022301-1-06	TM2302030201	Acceptable				
7	ET2022301-1-07	TM2302030201	Acceptable				
8	ET2022301-1-08	TM2302030201	Acceptable				
9	ET2022301-1-09	TM2302050301	Acceptable				
10	ET2022301-1-10	TM2302050301	Acceptable				
11	ET2022301-1-11	TM2302050301	Acceptable				
12	ET2022301-1-12	TM2302050301	Acceptable				
13	ET2022301-1-13	TM2302050301	Acceptable				
14	ET2022301-1-14	TM2302050301	Acceptable				

Sketch:



ABOVE FORGED ARE ULTRASONICALLY TESTED FOR INTERNAL DEFECTS USSING FLAT-BOTTOM HOLE PROCEDURE;
NO RECORDABLE INDICATION OBSERVED DURING THE TEST. HENCE ACCEPTABLE AS PER STANDARD.

UT Code:ASTM A388	Technique:Straight/Contact	Examined BY:	Approved by:
Exam. Stage: After heat treatment	Calibration Block:CSK IA		
Equipment:CTS-2020	Couplant: OIL		
Probe Used :2.5P Φ10	Acceptance Criteria: API 6A PSL 3		
Equipment Calibration Date :2022.09.10	Test Gain:20db + 5 db	Level as per UT II	Level as per UT II
Equipment Due Date: 2023.09.09			

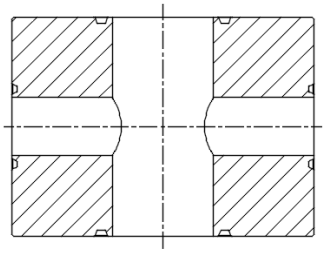
C&W International Fabricators

Magnetic Particle Inspection Report

Serial No.:	ET2022301-1-01...14	PO# :	ET2022301	Date:	2023-03-02
Part No:	SC715415	API Monogram:	YES	Report#:	2023030201
Specification:	API Spec 6A/ASTM E709	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15MX4 1/16″ 15M EE LU PSL3 PR1			Qty:	14 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-1-01	TM2302030201	Acceptable				
2	ET2022301-1-02	TM2302030201	Acceptable				
3	ET2022301-1-03	TM2302030201	Acceptable				
4	ET2022301-1-04	TM2302030201	Acceptable				
5	ET2022301-1-05	TM2302030201	Acceptable				
6	ET2022301-1-06	TM2302030201	Acceptable				
7	ET2022301-1-07	TM2302030201	Acceptable				
8	ET2022301-1-08	TM2302030201	Acceptable				
9	ET2022301-1-09	TM2302050301	Acceptable				
10	ET2022301-1-10	TM2302050301	Acceptable				
11	ET2022301-1-11	TM2302050301	Acceptable				
12	ET2022301-1-12	TM2302050301	Acceptable				
13	ET2022301-1-13	TM2302050301	Acceptable				
14	ET2022301-1-14	TM2302050301	Acceptable				

Sketch/Inspection Coverage:



Fluorescent magnetic particle inspection was performed on all accessible wetted/sealing surface with acceptable results

Evaluation & Disposition : Found to be satisfactory.

Equipment	CJD-9000	MT Code	ASTM E709	Examined	Approved
Test Method	Fulcrum [ ] Cablel [√]	Particle Type	Fluorescence Wet	BY: Level as per MT Ⅱ	by: Level as per MT Ⅱ
Exam.Stage	Rough After Ra ≦ 6.3μm	Test Piece	A1-30/100		
Magnetizing time	1-3S	Circular AMPS/Turns	900A/1		
Concentration	0.3ml/100ml	UV-Light Intensity	≥1000Uw/C ㎡		

C&W International Fabricators

REPORT INDEX

Purchase Order: ET2022301-1
Quantity: 14 EA
Shipment No.:
Shipment Date:

C&W International Fabricators

METALLURGICAL TEST CERTIFICATE

Serial No.:	ET2022301-1-15...28	PO# :	ET2022301-1	Date:	2023-03-11
Part No:	SC715415	API Monogram:	YES	Report#:	2023031101
Specification:	API Spec 6A/ASTM A370	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16" 15MX4 1/16" 15M EE LU PSL3 PR1			Qty:	14 EA

TEST CONDITION

Test Bar Size:	QTC, 4" x 4" x 8"	Bar Di:	12.7 mm (0.5")
Melt Practice	EF + LF + VD	Reduction Ratio Min:	5:1
Yield Stress	0.2% offset	Gauge Length	50.8mm

CHEMICAL COMPOSITION

Mill No.:	Qty	Test No.	C	Mn	Si	S	P	Ni	Cu	Mo	Cr	V
Spec Min			0.28	0.40	0.15	/	/	/	/	0.15	0.80	/
Spec Max			0.33	0.60	0.35	0.025	0.025	0.50	0.35	0.25	1.10	0.30
2087148Z	14	1	0.300	0.540	0.260	0.005	0.011	0.050	0.060	0.160	1.060	0.006

MECHANICAL COMPOSITION

Heat Lot No.	QTY.	Test No.	Yield Strength (KPsi)	Tensile Strength (KPsi)	Elongation%	Reduction of Area%	Hardness HB	10mm×10mm ChARPY J(ft.lb) At-46° c	Minimum Lateral	Shear Fraction
Spec Min			75K	95K	18.0	35.0	197	27J		
Spec Max			/	/	/	/	235	/		
TM2302220201	8	1	79.5K	99.6K	25.8	54.6	220	68;72;78		
TM2302230301	6	2	79.3K	99.5K	27.5	51.5	218	80;89;90		

HEAT TREATMENT

Forgings:	5:1	Test Bar(OTC)	
Normalized:	900℃ 6 HRS	Normalized:	900℃ 6 HRS
Austenitized:	860℃ 6 HRS	Austenitized:	860℃ 6 HRS
Quenchant:	Water	Quenchant:	Water
Start Temp:	29 ℃	Start Temp:	29 ℃
End Temp:	36 ℃	End Temp:	36 ℃
Temper:	660℃ 9 HRS AIR	Temper:	660℃ 9 HRS AIR

We hereby certify that all test results and procedure information contained herein are correct and true as in contained the records of the company and also no welding or weld repair was performed on subject parts.

Inspected by:		Approved by:	

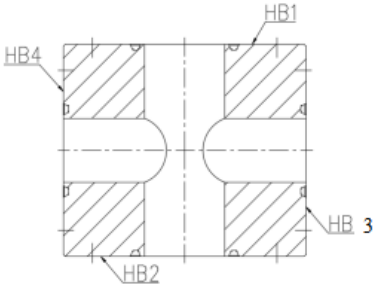
C&W International Fabricators

Hardness Test Report

Serial No.:	ET2022301-1-15...28	PO# :	ET2022301-1	Date:	2023-03-11
Part No:	SC715415	API Monogram:	YES	Report#:	2023031101
Specification:	API Spec 6A/ASTM E10	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15MX4 1/16″ 15M EE LU PSL3 PR1			Qty:	14 EA

Item	S/N	Heat Lot No.	HB1	HB2	HB3	HB4	HB5	HB6	HB7	HB8
1	ET2022301-1-15	TM2302220201	229	231	229	231				
2	ET2022301-1-16	TM2302220201	225	229	225	229				
3	ET2022301-1-17	TM2302220201	229	231	229	231				
4	ET2022301-1-18	TM2302220201	223	225	221	223				
5	ET2022301-1-19	TM2302220201	231	229	229	231				
6	ET2022301-1-20	TM2302220201	225	221	223	225				
7	ET2022301-1-21	TM2302220201	217	223	217	221				
8	ET2022301-1-22	TM2302220201	231	229	235	231				
9	ET2022301-1-23	TM2302230301	225	223	223	225				
10	ET2022301-1-24	TM2302230301	223	221	217	221				
11	ET2022301-1-25	TM2302230301	221	225	223	223				
12	ET2022301-1-26	TM2302230301	217	221	223	221				
13	ET2022301-1-27	TM2302230301	229	225	229	225				
14	ET2022301-1-28	TM2302230301	225	223	221	223				

Sketch:



Method Used:	Impact Energy:3000Kg. Diameter of steel ball:10mm		
Acceptable Hardness	197HBW-235HBW	Inspected by:	Approved by:
Judgments:	[V] Conform	刘永友	徐
	[ ] Do not conform		

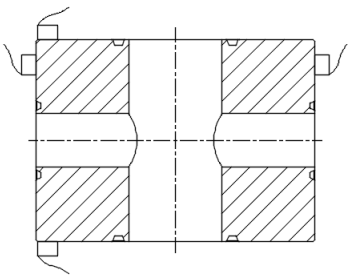
C&W International Fabricators

ULTRASONIC EXAMINATION REPORT

Serial No.:	ET2022301-1-15...28	PO# :	ET2022301-1	Date:	2023-03-11
Part No:	SC715415	API Monogram:	YES	Report#:	2023031101
Specification:	API Spec 6A/ASTM A388	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15MX4 1/16″ 15M EE LU PSL3 PR1			Qty:	14 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-1-15	TM2302220201	Acceptable				
2	ET2022301-1-16	TM2302220201	Acceptable				
3	ET2022301-1-17	TM2302220201	Acceptable				
4	ET2022301-1-18	TM2302220201	Acceptable				
5	ET2022301-1-19	TM2302220201	Acceptable				
6	ET2022301-1-20	TM2302220201	Acceptable				
7	ET2022301-1-21	TM2302220201	Acceptable				
8	ET2022301-1-22	TM2302220201	Acceptable				
9	ET2022301-1-23	TM2302230301	Acceptable				
10	ET2022301-1-24	TM2302230301	Acceptable				
11	ET2022301-1-25	TM2302230301	Acceptable				
12	ET2022301-1-26	TM2302230301	Acceptable				
13	ET2022301-1-27	TM2302230301	Acceptable				
14	ET2022301-1-28	TM2302230301	Acceptable				

Sketch:



ABOVE FORGED ARE ULTRASONICALLY TESTED FOR INTERNAL DEFECTS USSING FLAT-BOTTOM HOLE PROCEDURE;
NO RECORDABLE INDICATION OBSERVED DURING THE TEST. HENCE ACCEPTABLE AS PER STANDARD.

UT Code:ASTM A388	Technique:Straight/Contact	Examined BY:	Approved by:
Exam. Stage: After heat treatment	Calibration Block:CSK IA		
Equipment:CTS-2020	Couplant: OIL		
Probe Used :2.5P Φ10	Acceptance Criteria: API 6A PSL 3		
Equipment Calibration Date :2022.09.10	Test Gain:20db + 5 db	Level as per UT II	Level as per UT II
Equipment Due Date: 2023.09.09			

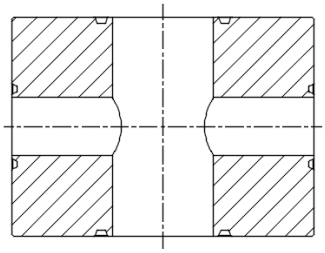
C&W International Fabricators

Magnetic Particle Inspection Report

Serial No.:	ET2022301-1-15...28	PO# :	ET2022301-1	Date:	2023-03-11
Part No:	SC715415	API Monogram:	YES	Report#:	2023031101
Specification:	API Spec 6A/ASTM E709	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15MX4 1/16″ 15M EE LU PSL3 PR1			Qty:	14 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-1-15	TM2302220201	Acceptable				
2	ET2022301-1-16	TM2302220201	Acceptable				
3	ET2022301-1-17	TM2302220201	Acceptable				
4	ET2022301-1-18	TM2302220201	Acceptable				
5	ET2022301-1-19	TM2302220201	Acceptable				
6	ET2022301-1-20	TM2302220201	Acceptable				
7	ET2022301-1-21	TM2302220201	Acceptable				
8	ET2022301-1-22	TM2302220201	Acceptable				
9	ET2022301-1-23	TM2302230301	Acceptable				
10	ET2022301-1-24	TM2302230301	Acceptable				
11	ET2022301-1-25	TM2302230301	Acceptable				
12	ET2022301-1-26	TM2302230301	Acceptable				
13	ET2022301-1-27	TM2302230301	Acceptable				
14	ET2022301-1-28	TM2302230301	Acceptable				

Sketch/Inspection Coverage:



Fluorescent magnetic particle inspection was performed on all accessible wetted/sealing surface with acceptable results

Evaluation & Disposition : Found to be satisfactory.

Equipment	CJD-9000	MT Code	ASTM E709	Examined	Approved
Test Method	Fulcrum [ ] Cablel [√]	Particle Type	Fluorescence Wet	BY: Level as per MT Ⅱ	by: Level as per MT Ⅱ
Exam.Stage	Rough After Ra ≦ 6.3μm	Test Piece	A1-30/100		
Magnetizing time	1-3S	Circular AMPS/Turns	900A/1		
Concentration	0.3ml/100ml	UV-Light Intensity	≥1100Uw/C ㎡		

C&W International Fabricators

REPORT INDEX

Purchase Order: ET2022301-4
Quantity: 18 EA
Shipment No.:
Shipment Date:

Activity No.	Characteristics	Reference Page
1.1	STUDDED TEE 7 1/16" 15M-3-WAY	Page-2
1.1.1	Metallurgical Test Certificate	Page-2
1.1.2	Mechanical Testing	Page-2
1.1.3	Chemical Testing	Page-2
1.1.4	Heat Treatment	Page-2
2.1	Hardness Test	Page-3
2.2	Ultrasonic Testing	Page-4
2.3	Magnetic Particle Inspection Report	Page-5

C&W International Fabricators

METALLURGICAL TEST CERTIFICATE

Serial No.:	ET2022301-4-01...18	PO# :	ET2022301	Date:	2023-03-02
Part No:	ST715	API Monogram:	YES	Report#:	2023030202
Specification:	API Spec 6A/ASTM A370	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16" 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

TEST CONDITION

Test Bar Size:	QTC, 4" x 4" x 8"	Bar Di:	12.7 mm (0.5")
Melt Practice	EF + LF + VD	Reduction Ratio Min:	5:1
Yield Stress	0.2% offset	Gauge Length	50.8mm

CHEMICAL COMPOSITION

Mill No.:	Qty	Test No.	C	Mn	Si	S	P	Ni	Cu	Mo	Cr	V
Spec Min			0.28	0.40	0.15	/	/	/	/	0.15	0.80	/
Spec Max			0.33	0.60	0.35	0.025	0.025	0.50	0.35	0.25	1.10	0.30
2087148Z	14	1	0.300	0.540	0.260	0.005	0.011	0.050	0.060	0.160	1.060	0.006

MECHANICAL COMPOSITION

Heat Lot No.	QTY.	Test No.	Yield Strength (KPsi)	Tensile Strength (KPsi)	Elongation%	Reduction of Area%	Hardness HB	10mm×10mm ChARPY J(ft.lb) At-46° c	Minimum Lateral	Shear Fraction
Spec Min			75K	95K	18.0	35.0	197	27J		
Spec Max			/	/	/	/	235	/		
TM2302100201	6	1	76.5K	96.0K	25.0	53.0	220	38;44;50		
TM2302120201	6	2	77.0K	97.3K	26.0	53.8	216	42;49;58		
TM2302140201	6	3	77.3K	98.0K	27.6	55.2	222	61;69;73		

HEAT TREATMENT

Forgings: 5:1		Test Bar(OTC)	
Normalized:	900℃ 6 HRS	Normalized:	900℃ 6 HRS
Austenitized:	860℃ 6 HRS	Austenitized:	860℃ 6 HRS
Quenchant:	Water	Quenchant:	Water
Start Temp:	28 ℃	Start Temp:	28 ℃
End Temp:	39 ℃	End Temp:	39 ℃
Temper:	660℃ 9 HRS AIR	Temper:	660℃ 9 HRS AIR

We hereby certify that all test results and procedure information contained herein are correct and true as in contained the records of the company and also no welding or weld repair was performed on subject parts.

Inspected by:		Approved by:	

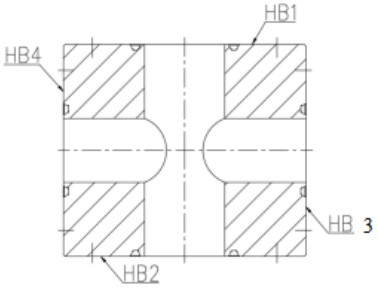
C&W International Fabricators

Hardness Test Report

Serial No.:	ET2022301-4-01...18	PO# :	ET2022301	Date:	2023-03-02
Part No:	ST715	API Monogram:	YES	Report#:	2023030202
Specification:	API Spec 6A/ASTM E10	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

Item	S/N	Heat Lot No.	HB1	HB2	HB3	HB4	HB5	HB6	HB7	HB8
1	ET2022301-4-01	TM2302100201	217	221	217					
2	ET2022301-4-02	TM2302100201	221	223	221					
3	ET2022301-4-03	TM2302100201	225	221	223					
4	ET2022301-4-04	TM2302100201	223	225	225					
5	ET2022301-4-05	TM2302100201	225	221	223					
6	ET2022301-4-06	TM2302100201	217	219	217					
7	ET2022301-4-07	TM2302120201	221	223	221					
8	ET2022301-4-08	TM2302120201	217	221	217					
9	ET2022301-4-09	TM2302120201	223	225	221					
10	ET2022301-4-10	TM2302120201	212	215	212					
11	ET2022301-4-11	TM2302120201	215	217	217					
12	ET2022301-4-12	TM2302120201	217	221	217					
13	ET2022301-4-13	TM2302140201	221	223	221					
14	ET2022301-4-14	TM2302140201	217	215	217					
15	ET2022301-4-15	TM2302140201	223	221	223					
16	ET2022301-4-16	TM2302140201	225	223	221					
17	ET2022301-4-17	TM2302140201	221	217	221					
18	ET2022301-4-18	TM2302140201	223	221	225					

Sketch:



Method Used:	Impact Energy:3000Kg. Diameter of steel ball:10mm		
Acceptable Hardness	197HBW-235HBW	Inspected by:	Approved by:
Judgments:	[V] Conform		
	[ ] Do not conform		

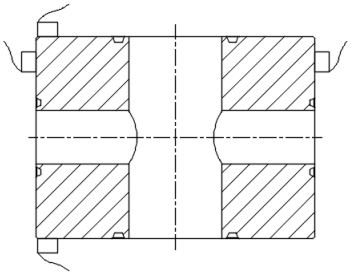
C&W International Fabricators

ULTRASONIC EXAMINATION REPORT

Serial No.:	ET2022301-4-01...18	PO# :	ET2022301	Date:	2023-03-02
Part No:	ST715	API Monogram:	YES	Report#:	2023030202
Specification:	API Spec 6A/ASTM A388	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-4-01	TM2302100201	Acceptable				
2	ET2022301-4-02	TM2302100201	Acceptable				
3	ET2022301-4-03	TM2302100201	Acceptable				
4	ET2022301-4-04	TM2302100201	Acceptable				
5	ET2022301-4-05	TM2302100201	Acceptable				
6	ET2022301-4-06	TM2302100201	Acceptable				
7	ET2022301-4-07	TM2302120201	Acceptable				
8	ET2022301-4-08	TM2302120201	Acceptable				
9	ET2022301-4-09	TM2302120201	Acceptable				
10	ET2022301-4-10	TM2302120201	Acceptable				
11	ET2022301-4-11	TM2302120201	Acceptable				
12	ET2022301-4-12	TM2302120201	Acceptable				
13	ET2022301-4-13	TM2302140201	Acceptable				
14	ET2022301-4-14	TM2302140201	Acceptable				
15	ET2022301-4-15	TM2302140201	Acceptable				
16	ET2022301-4-16	TM2302140201	Acceptable				
17	ET2022301-4-17	TM2302140201	Acceptable				
18	ET2022301-4-18	TM2302140201	Acceptable				

Sketch:



ABOVE FORGED ARE ULTRASONICALLY TESTED FOR INTERNAL DEFECTS USSING FLAT-BOTTOM HOLE PROCEDURE;
NO RECORDABLE INDICATION OBSERVED DURING THE TEST. HENCE ACCEPTABLE AS PER STANDARD.

UT Code:ASTM A388	Technique:Straight/Contact	Examined BY:	Approved by:
Exam. Stage: After heat treatment	Calibration Block:CSK IA		
Equipment:CTS-2020	Couplant: OIL		
Probe Used :2.5P Φ10	Acceptance Criteria: API 6A PSL 3		
Equipment Calibration Date :2022.09.10	Test Gain:20db + 5 db	Level as per UT II	Level as per UT II
Equipment Due Date: 2023.09.09			

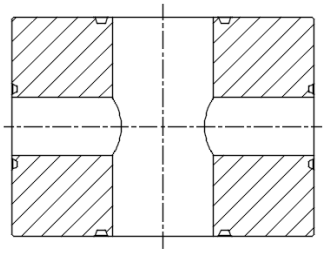
C&W International Fabricators

Magnetic Particle Inspection Report

Serial No.:	ET2022301-4-01...18	PO# :	ET2022301	Date:	2023-03-02
Part No:	ST715	API Monogram:	YES	Report#:	2023030202
Specification:	API Spec 6A/ASTM E709	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3-WAY EE LU PSL3 PR1			Qty:	18 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022301-4-01	TM2302100201	Acceptable				
2	ET2022301-4-02	TM2302100201	Acceptable				
3	ET2022301-4-03	TM2302100201	Acceptable				
4	ET2022301-4-04	TM2302100201	Acceptable				
5	ET2022301-4-05	TM2302100201	Acceptable				
6	ET2022301-4-06	TM2302100201	Acceptable				
7	ET2022301-4-07	TM2302120201	Acceptable				
8	ET2022301-4-08	TM2302120201	Acceptable				
9	ET2022301-4-09	TM2302120201	Acceptable				
10	ET2022301-4-10	TM2302120201	Acceptable				
11	ET2022301-4-11	TM2302120201	Acceptable				
12	ET2022301-4-12	TM2302120201	Acceptable				
13	ET2022301-4-13	TM2302140201	Acceptable				
14	ET2022301-4-14	TM2302140201	Acceptable				
15	ET2022301-4-15	TM2302140201	Acceptable				
16	ET2022301-4-16	TM2302140201	Acceptable				
17	ET2022301-4-17	TM2302140201	Acceptable				
18	ET2022301-4-18	TM2302140201	Acceptable				

Sketch/Inspection Coverage:



Fluorescent magnetic particle inspection was performed on all accessible wetted/sealing surface with acceptable results

Evaluation & Disposition : Found to be satisfactory.

Equipment	CJD-9000	MT Code	ASTM E709	Examined	Approved
Test Method	Fulcrum [ ] Cablel [√]	Particle Type	Fluorescence Wet	BY: Level as per MT Ⅱ	by: Level as per MT Ⅱ
Exam.Stage	Rough After Ra ≦ 6.3μm	Test Piece	A1-30/100		
Magnetizing time	1-3S	Circular AMPS/Turns	900A/1		
Concentration	0.3ml/100ml	UV-Light Intensity	≥1000Uw/C ㎡		

C&W International Fabricators

REPORT INDEX

Purchase Order: ET2022189-3
Quantity: 10 EA
Shipment No.:
Shipment Date:

C&W International Fabricators

METALLURGICAL TEST CERTIFICATE

Serial No.:	ET2022189-3-01....10	PO# :	ET2022189	Date:	2022-09-27
Part No:		API Monogram:	YES	Report#:	20220927
Specification:	API Spec 6A/ ASTM A370	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16" 15M-4 1/16" 15M EE LU PSL3 PR1			Qty:	10 EA

TEST CONDITION

Test Bar Size:	QTC, 4" x 4" x 8"	Bar Di:	12.7 mm (0.5")
Melt Practice	EF + LF + VD	Reduction Ratio Min:	4:1
Yield Stress	0.2% offset	Gauge Length	50.8mm

CHEMICAL COMPOSITION

Mill No.:	Qty	Test No.	C	Mn	Si	S	P	Ni	Cu	Mo	Cr	V
Spec Min			0.28	0.40	0.15	/	/	/	/	0.15	0.80	/
Spec Max			0.33	0.60	0.35	0.025	0.025	0.50	0.35	0.25	1.10	0.30
CD22-03-076	10	1	0.314	0.496	0.193	0.014	0.017	0.248	0.073	0.195	0.911	0.005

MECHANICAL COMPOSITION

Heat Lot No.	QTY.	Test No.	Yield Strength (KPsi)	Tensile Strength (KPsi)	Elongation%	Reduction of Area%	Hardness HB	10mm×10mm ChARPY J(ft. lb) At-46° c	Minimum Lateral	Shear Fraction
Spec Min			75K	95K	18.0	35.0	197	27J		
Spec Max			/	/	/	/	235	/		
TM2209180301	10	1	81.5K	102.5K	51.5	68.1	221	42;58;47		

HEAT TREATMENT

Forgings:	4:1	Test Bar(OTC)	
Normalized:	902℃ 5.5 HRS	Normalized:	902℃ 5.5 HRS
Austenitized:	860℃ 5.5 HRS	Austenitized:	860℃ 5.5 HRS
Quenchant:	Water	Quenchant:	Water
Start Temp:	29 ℃	Start Temp:	29 ℃
End Temp:	35 ℃	End Temp:	35 ℃
Temper:	665℃ 8 HRS AIR	Temper:	665℃ 8 HRS AIR

We hereby certify that all test results and procedure information contained herein are correct and true as in contained the records of the company and also no welding or weld repair was performed on subject parts.

Inspected by:		Approved by:	

C&W International Fabricators

Hardness Test Report

Serial No.:	ET2022189-3-01....10	PO# :	ET2022189	Date:	2022-09-27
Part No:		API Monogram:	YES	Report#:	20220927
Specification:	API Spec 6A/ ASTM E10	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15M-4 1/16″ 15M EE LU PSL3 PR1			Qty:	10 EA

Item	S/N	Heat Lot No.	HB1	HB2	HB3	HB4	HB5	HB6	HB7	HB8
1	ET2022189-3-01	TM2209180301	229	231	229	231				
2	ET2022189-3-02	TM2209180301	225	223	225	223				
3	ET2022189-3-03	TM2209180301	229	225	229	225				
4	ET2022189-3-04	TM2209180301	225	229	227	229				
5	ET2022189-3-05	TM2209180301	223	221	223	225				
6	ET2022189-3-06	TM2209180301	231	229	231	229				
7	ET2022189-3-07	TM2209180301	223	225	221	225				
8	ET2022189-3-08	TM2209180301	229	231	229	231				
9	ET2022189-3-09	TM2209180301	221	225	223	225				
10	ET2022189-3-10	TM2209180301	225	223	221	223				

Sketch:

Method Used:	Impact Energy:3000Kg. Diameter of steel ball:10mm		
Acceptable Hardness	197HBW-235HBW	Inspected by:	Approved by:
Judgments:	[V] Conform	刘永友	徐根
	[ ] Do not conform		

C&W International Fabricators

ULTRASONIC EXAMINATION REPORT

Serial No.:	ET2022189-3-01....10	PO# :	ET2022189	Date:	2022-09-27
Part No:		API Monogram:	YES	Report#:	20220927
Specification:	API Spec 6A/ ASTM A388	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15M-4 1/16″ 15M EE LU PSL3 PR1			Qty:	10 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022189-3-01	TM2209180301	Acceptable				
2	ET2022189-3-02	TM2209180301	Acceptable				
3	ET2022189-3-03	TM2209180301	Acceptable				
4	ET2022189-3-04	TM2209180301	Acceptable				
5	ET2022189-3-05	TM2209180301	Acceptable				
6	ET2022189-3-06	TM2209180301	Acceptable				
7	ET2022189-3-07	TM2209180301	Acceptable				
8	ET2022189-3-08	TM2209180301	Acceptable				
9	ET2022189-3-09	TM2209180301	Acceptable				
10	ET2022189-3-10	TM2209180301	Acceptable				
11	ET2022189-3-11	TM2209180301	Acceptable				
12	ET2022189-3-12	TM2209180301	Acceptable				

Sketch:

UT Code:ASTM A388	Technique:Straight/Contact	Examined BY:	Approved by:
Exam.Stage: After heat treatment	Calibration Block:CSK IA		
Equipment:CTS-2020	Couplant: OIL		
Probe Used :2.5P Φ10	Acceptance Criteria: API 6A PSL 3		
Equipment Calibration Date :2022.09.10	Test Gain:20db + 5 db	Level as per UT Ⅱ	Level as per UT Ⅱ
Equipment Due Date: 2023.09.09			

C&W International Fabricators

Magnetic Particle Inspection Report

Serial No.:	ET2022189-3-01....10	PO# :	ET2022189	Date:	2022-09-27
Part No:		API Monogram:	YES	Report#:	20220927
Specification:	API Spec 6A/ ASTM E709	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15M-4 1/16″ 15M EE LU PSL3 PR1			Qty:	10 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022189-3-01	TM2209180301	Acceptable				
2	ET2022189-3-02	TM2209180301	Acceptable				
3	ET2022189-3-03	TM2209180301	Acceptable				
4	ET2022189-3-04	TM2209180301	Acceptable				
5	ET2022189-3-05	TM2209180301	Acceptable				
6	ET2022189-3-06	TM2209180301	Acceptable				
7	ET2022189-3-07	TM2209180301	Acceptable				
8	ET2022189-3-08	TM2209180301	Acceptable				
9	ET2022189-3-09	TM2209180301	Acceptable				
10	ET2022189-3-10	TM2209180301	Acceptable				
11	ET2022189-3-11	TM2209180301	Acceptable				
12	ET2022189-3-12	TM2209180301	Acceptable				

Sketch/Inspection Coverage:

Fluorescent magnetic particle inspection was performed on all accessible wetted/sealing surface

Evaluation & Disposition : Found to be satisfactory.

Equipment	CJD-9000	MT Code	ASTM E709	Examined BY:	Approved by:
Test Method	Fulcrum [ ] Cablel [√]	Particle Type	Fluorescence Wet		
Exam. Stage	Rough After Ra ≦ 6.3μm	Test Piece	A1-30/100	Level as per MT Ⅱ	Level as per MT Ⅱ
Magnetizing time	1-3S	Circular AMPS/Turns	900A/1		
Concentration	0.3ml/100ml	UV-Light Intensity	≥1000Uw/C ㎡		

C&W International Fabricators

REPORT INDEX

Purchase Order: ET2022299-1
Quantity: 20 EA
Shipment No.:
Shipment Date:

C&W International Fabricators

METALLURGICAL TEST CERTIFICATE

Serial No.:	ET2022299-1-01....20	PO# :	ET2022299	Date:	2022-12-28
Part No:		API Monogram:	YES	Report#:	20221228
Specification:	API Spec 6A/ ASTM A370	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16" 15M-3 WAY EE LU PSL3 PR1			Qty:	20 EA

TEST CONDITION

Test Bar Size:	QTC, 4" x 4" x 8"	Bar Di:	12.7 mm (0.5")
Melt Practice	EF + LF + VD	Reduction Ratio Min:	4:1
Yield Stress	0.2% offset	Gauge Length	50.8mm

CHEMICAL COMPOSITION

Mill No.:	Qty	Test No.	C	Mn	Si	S	P	Ni	Cu	Mo	Cr	V
Spec Min			0.28	0.40	0.15	/	/	/	/	0.15	0.80	/
Spec Max			0.33	0.60	0.35	0.025	0.025	0.50	0.35	0.25	1.10	0.30
CD22-03-076	20	1	0.314	0.496	0.193	0.014	0.017	0.248	0.073	0.195	0.911	0.005

MECHANICAL COMPOSITION

Heat Lot No.	QTY.	Test No.	Yield Strength (KPsi)	Tensile Strength (KPsi)	Elongation%	Reduction of Area%	Hardness HB	10mm×10mm ChARPY J(ft. lb) At-46° c	Minimum Lateral	Shear Fraction
Spec Min			75K	95K	18.0	35.0	197	27J		
Spec Max			/	/	/	/	235	/		
TM2212080201	7	1	82.5 K	105.5K	53.5	61.8	221	53;44;49		
TM2212100201	7	1	80.5 K	101.0K	49.0	57.2	223	43;54;48		
TM2212120301	6	1	81.5 K	103.5K	56.5	67.1	225	51;49;57		

HEAT TREATMENT

Forgings: 4:1		Test Bar(OTC)	
Normalized:	902℃ 6.5 HRS	Normalized:	902℃ 6.5 HRS
Austenitized:	860℃ 6.5 HRS	Austenitized:	860℃ 6.5 HRS
Quenchant:	Water	Quenchant:	Water
Start Temp:	31 ℃	Start Temp:	31 ℃
End Temp:	39 ℃	End Temp:	39 ℃
Temper:	660℃ 9 HRS AIR	Temper:	660℃ 9 HRS AIR

We hereby certify that all test results and procedure information contained herein are correct and true as in contained the records of the company and also no welding or weld repair was performed on subject parts.

Inspected by:		Approved by:	

C&W International Fabricators

Hardness Test Report

Serial No.:	ET2022299-1-01....20	PO# :	ET2022299	Date:	2022-12-28
Part No:		API Monogram:	YES	Report#:	20221228
Specification:	API Spec 6A/ ASTM E10	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16" 15M-3 WAY EE LU PSL3 PR1			Qty:	20 EA

Item	S/N	Heat Lot No.	HB1	HB2	HB3	HB4	HB5	HB6	HB7	HB8
1	ET2022299-1-01	TM2212080201	223	225	221					
2	ET2022299-1-02	TM2212080201	225	221	223					
3	ET2022299-1-03	TM2212080201	229	225	225					
4	ET2022299-1-04	TM2212080201	221	217	221					
5	ET2022299-1-05	TM2212080201	223	221	223					
6	ET2022299-1-06	TM2212080201	225	223	221					
7	ET2022299-1-07	TM2212080201	223	229	225					
8	ET2022299-1-08	TM2212100201	225	221	223					
9	ET2022299-1-09	TM2212100201	229	231	229					
10	ET2022299-1-10	TM2212100201	221	225	223					
11	ET2022299-1-11	TM2212100201	217	221	217					
12	ET2022299-1-12	TM2212100201	223	225	223					
13	ET2022299-1-13	TM2212100201	225	223	221					
14	ET2022299-1-14	TM2212100201	221	225	223					
15	ET2022299-1-15	TM2212120301	217	221	223					
16	ET2022299-1-16	TM2212120301	225	223	229					
17	ET2022299-1-17	TM2212120301	229	225	229					
18	ET2022299-1-18	TM2212120301	217	221	217					
19	ET2022299-1-19	TM2212120301	223	225	221					
20	ET2022299-1-20	TM2212120301	225	229	225					

Sketch:

Method Used:	Impact Energy:3000Kg. Diameter of steel ball:10mm		
Acceptable Hardness	197HBW-235HBW	Inspected by:	Approved by:
Judgments:	[V] Conform	刘永友	徐根
	[ ] Do not conform		

C&W International Fabricators

ULTRASONIC EXAMINATION REPORT

Serial No.:	ET2022299-1-01....20	PO# :	ET2022299	Date:	2022-12-28
Part No:		API Monogram:	YES	Report#:	20221228
Specification:	API Spec 6A/ ASTM A388	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3 WAY EE LU PSL3 PR1			Qty:	20 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022299-1-01	TM2212080201	Acceptable				
2	ET2022299-1-02	TM2212080201	Acceptable				
3	ET2022299-1-03	TM2212080201	Acceptable				
4	ET2022299-1-04	TM2212080201	Acceptable				
5	ET2022299-1-05	TM2212080201	Acceptable				
6	ET2022299-1-06	TM2212080201	Acceptable				
7	ET2022299-1-07	TM2212080201	Acceptable				
8	ET2022299-1-08	TM2212100201	Acceptable				
9	ET2022299-1-09	TM2212100201	Acceptable				
10	ET2022299-1-10	TM2212100201	Acceptable				
11	ET2022299-1-11	TM2212100201	Acceptable				
12	ET2022299-1-12	TM2212100201	Acceptable				
13	ET2022299-1-13	TM2212100201	Acceptable				
14	ET2022299-1-14	TM2212100201	Acceptable				
15	ET2022299-1-15	TM2212120301	Acceptable				
16	ET2022299-1-16	TM2212120301	Acceptable				
17	ET2022299-1-17	TM2212120301	Acceptable				
18	ET2022299-1-18	TM2212120301	Acceptable				
19	ET2022299-1-19	TM2212120301	Acceptable				
20	ET2022299-1-20	TM2212120301	Acceptable				

Sketch:

UT Code:ASTM A388	Technique:Straight/Contact	Examined BY:	Approved by:
Exam. Stage: After heat treatment	Calibration Block:CSK IA		
Equipment:CTS-2020	Couplant: OIL		
Probe Used :2.5P Φ10	Acceptance Criteria: API 6A PSL 3		
Equipment Calibration Date :2022.09.10	Test Gain:20db + 5 db	Level as per UT Ⅱ	Level as per UT Ⅱ
Equipment Due Date: 2023.09.09			

C&W International Fabricators

Magnetic Particle Inspection Report

Serial No.:	ET2022299-1-01....20	PO# :	ET2022299	Date:	2022-12-28
Part No:		API Monogram:	YES	Report#:	20221228
Specification:	API Spec 6A/ ASTM E709	Material:	4130 75k per ASTM A29		
Description:	STUDDED TEE 7 1/16″ 15M-3 WAY EE LU PSL3 PR1			Qty:	20 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022299-1-01	TM2212080201	Acceptable				
2	ET2022299-1-02	TM2212080201	Acceptable				
3	ET2022299-1-03	TM2212080201	Acceptable				
4	ET2022299-1-04	TM2212080201	Acceptable				
5	ET2022299-1-05	TM2212080201	Acceptable				
6	ET2022299-1-06	TM2212080201	Acceptable				
7	ET2022299-1-07	TM2212080201	Acceptable				
8	ET2022299-1-08	TM2212100201	Acceptable				
9	ET2022299-1-09	TM2212100201	Acceptable				
10	ET2022299-1-10	TM2212100201	Acceptable				
11	ET2022299-1-11	TM2212100201	Acceptable				
12	ET2022299-1-12	TM2212100201	Acceptable				
13	ET2022299-1-13	TM2212100201	Acceptable				
14	ET2022299-1-14	TM2212100201	Acceptable				
15	ET2022299-1-15	TM2212120301	Acceptable				
16	ET2022299-1-16	TM2212120301	Acceptable				
17	ET2022299-1-17	TM2212120301	Acceptable				
18	ET2022299-1-18	TM2212120301	Acceptable				
19	ET2022299-1-19	TM2212120301	Acceptable				
20	ET2022299-1-20	TM2212120301	Acceptable				

Sketch/Inspection Coverage:

Fluorescent magnetic particle inspection was performed on all accessible wetted/sealing surface

Evaluation & Disposition : Found to be satisfactory.

Equipment	CJD-9000	MT Code	ASTM E709	Examined	Approved
Test Method	Fulcrum [ ] Cablel [√]	Particle Type	Fluorescence Wet	BY:	by:
Exam. Stage	Rough After Ra ≦ 6.3μm	Test Piece	A1-30/100	Level as per MT Ⅱ	Level as per MT Ⅱ
Magnetizing time	1-3S	Circular AMPS/Turns	900A/1		
Concentration	0.3ml/100ml	UV-Light Intensity	≥1000Uw/C ㎡		

C&W International Fabricators

REPORT INDEX

Purchase Order: ET2022223-1
Quantity: 10 EA
Shipment No.:
Shipment Date:

C&W International Fabricators

METALLURGICAL TEST CERTIFICATE

Serial No.:	ET2022223-1-01....10	PO# :	ET2022223	Date:	2022-11-27
Part No:		API Monogram:	YES	Report#:	20221127
Specification:	API Spec 6A/ ASTM A370	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15M-4 1/16″ 15M EE LU PSL3 PR1			Qty:	10 EA

TEST CONDITION

Test Bar Size:	QTC, 4" x 4" x 8"	Bar Di:	12.7 mm (0.5")
Melt Practice	EF + LF + VD	Reduction Ratio Min:	4:1
Yield Stress	0.2% offset	Gauge Length	50.8mm

CHEMICAL COMPOSITION

Mill No.:	Qty	Test No.	C	Mn	Si	S	P	Ni	Cu	Mo	Cr	V
Spec Min			0.28	0.40	0.15	/	/	/	/	0.15	0.80	/
Spec Max			0.33	0.60	0.35	0.025	0.025	0.50	0.35	0.25	1.10	0.30
CD22-03-076	10	1	0.314	0.496	0.193	0.014	0.017	0.248	0.073	0.195	0.911	0.005

MECHANICAL COMPOSITION

Heat Lot No.	QTY.	Test No.	Yield Strength (KPsi)	Tensile Strength (KPsi)	Elongation%	Reduction of Area%	Hardness HB	10mm×10mm ChARPY J(ft. lb) At-46° c	Minimum Lateral	Shear Fraction
Spec Min			75K	95K	18.0	35.0	197	27J		
Spec Max			/	/	/	/	235	/		
TM2211010301	10	1	81.0K	102.0K	48.5	64.1	221	52;41;45		

HEAT TREATMENT

Forgings:	4:1	Test Bar(OTC)	
Normalized:	902℃ 5 HRS	Normalized:	902℃ 5 HRS
Austenitized:	860℃ 5 HRS	Austenitized:	860℃ 5 HRS
Quenchant:	Water	Quenchant:	Water
Start Temp:	35 ℃	Start Temp:	35 ℃
End Temp:	43 ℃	End Temp:	43 ℃
Temper:	660℃ 7 HRS AIR	Temper:	660℃ 7 HRS AIR

We hereby certify that all test results and procedure information contained herein are correct and true as in contained the records of the company and also no welding or weld repair was performed on subject parts.

Inspected by:		Approved by:	

C&W International Fabricators

Hardness Test Report

Serial No.:	ET2022223-1-01....10	PO# :	ET2022223	Date:	2022-11-27
Part No:		API Monogram:	YES	Report#:	20221127
Specification:	API Spec 6A/ ASTM E10	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15M-4 1/16″ 15M EE LU PSL3 PR1			Qty:	10 EA

Item	S/N	Heat Lot No.	HB1	HB2	HB3	HB4	HB5	HB6	HB7	HB8
1	ET2022223-1-01	TM2211010301	229	231	229	231				
2	ET2022223-1-02	TM2211010301	223	225	221	225				
3	ET2022223-1-03	TM2211010301	225	229	225	229				
4	ET2022223-1-04	TM2211010301	221	225	221	223				
5	ET2022223-1-05	TM2211010301	225	229	225	229				
6	ET2022223-1-06	TM2211010301	231	229	231	229				
7	ET2022223-1-07	TM2211010301	223	225	221	223				
8	ET2022223-1-08	TM2211010301	225	221	223	225				
9	ET2022223-1-09	TM2211010301	231	229	231	229				
10	ET2022223-1-10	TM2211010301	229	223	221	225				

Sketch:

Method Used:	Impact Energy:3000Kg. Diameter of steel ball:10mm		
Acceptable Hardness	197HBW-235HBW	Inspected by:	Approved by:
Judgments:	[V] Conform	刘永友	徐权
	[ ] Do not conform		

C&W International Fabricators

ULTRASONIC EXAMINATION REPORT

Serial No.:	ET2022223-1-01....10	PO# :	ET2022223	Date:	2022-11-27
Part No:		API Monogram:	YES	Report#:	20221127
Specification:	API Spec 6A/ ASTM A388	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15M-4 1/16″ 15M EE LU PSL3 PR1			Qty:	10 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022223-1-01	TM2211010301	Acceptable				
2	ET2022223-1-02	TM2211010301	Acceptable				
3	ET2022223-1-03	TM2211010301	Acceptable				
4	ET2022223-1-04	TM2211010301	Acceptable				
5	ET2022223-1-05	TM2211010301	Acceptable				
6	ET2022223-1-06	TM2211010301	Acceptable				
7	ET2022223-1-07	TM2211010301	Acceptable				
8	ET2022223-1-08	TM2211010301	Acceptable				
9	ET2022223-1-09	TM2211010301	Acceptable				
10	ET2022223-1-10	TM2211010301	Acceptable				

Sketch:

UT Code:ASTM A388	Technique:Straight/Contact	Examined BY:	Approved by:
Exam.Stage: After heat treatment	Calibration Block:CSK IA		
Equipment:CTS-2020	Couplant: OIL		
Probe Used :2.5P Φ10	Acceptance Criteria: API 6A PSL 3		
Equipment Calibration Date :2022.09.10	Test Gain:20db + 5 db	Level as per UT Ⅱ	Level as per UT Ⅱ
Equipment Due Date: 2023.09.09			

C&W International Fabricators

Magnetic Particle Inspection Report

Serial No.:	ET2022223-1-01....10	PO# :	ET2022223	Date:	2022-11-27
Part No:		API Monogram:	YES	Report#:	20221127
Specification:	API Spec 6A/ ASTM E709	Material:	4130 75k per ASTM A29		
Description:	STUDDED CROSS 7 1/16″ 15M-4 1/16″ 15M EE LU PSL3 PR1			Qty:	10 EA

Item	S/N	Heat Lot No.	Result	Item	S/N	Heat Lot No.	Result
1	ET2022223-1-01	TM2211010301	Acceptable				
2	ET2022223-1-02	TM2211010301	Acceptable				
3	ET2022223-1-03	TM2211010301	Acceptable				
4	ET2022223-1-04	TM2211010301	Acceptable				
5	ET2022223-1-05	TM2211010301	Acceptable				
6	ET2022223-1-06	TM2211010301	Acceptable				
7	ET2022223-1-07	TM2211010301	Acceptable				
8	ET2022223-1-08	TM2211010301	Acceptable				
9	ET2022223-1-09	TM2211010301	Acceptable				
10	ET2022223-1-10	TM2211010301	Acceptable				

Sketch/Inspection Coverage:

Fluorescent magnetic particle inspection was performed on all accessible wetted/sealing surface

Evaluation & Disposition : Found to be satisfactory.

Equipment	CJD-9000	MT Code	ASTM E709	Examined	Approved
Test Method	Fulcrum [ ] Cablel [√]	Particle Type	Fluorescence Wet	BY:	by:
Exam. Stage	Rough After Ra ≦ 6.3μm	Test Piece	A1-30/100	Level as per MT Ⅱ	Level as per MT Ⅱ
Magnetizing time	1-3S	Circular AMPS/Turns	900A/1		
Concentration	0.3ml/100ml	UV-Light Intensity	≥1000Uw/C ㎡		