



STIG WELDING SYSTEM

Shanghai Duomu industrial Co., Ltd.

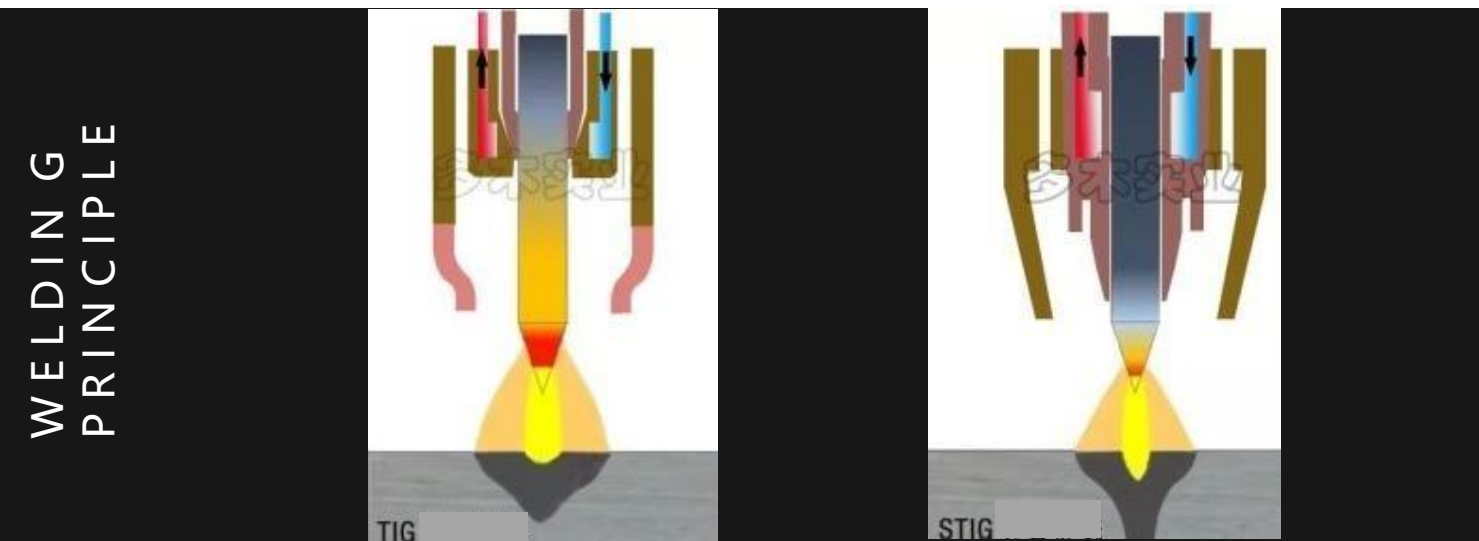
NEW HIGH
PENETRATION
DEEP HOLE STIG
WELDING SYSTEM

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DM-SWS1000			
Total input voltage	3*380V+N 50/60H	Input current of welding machine	3XI1=60A
Input capacity of welding machine	38.4KVA	Power factor	0.92
Cooling-water machine	Single 220V 50 / 60HZ	Input capacity	1.2KVA
Output current range	50A-1000A	Arc pressure with scope	12-20v
Outputs the no-load voltage	45V	Output serving voltage	12-34V
Levels of protection	Ip21	Protection Mode	Temperature, over current, water flow
Cyclic duration factor	I2=1000A X=60%	I2=600A X=100%	
Weight	140kg	Size	1400mm*620mm*520mm



High deep melting lock hole STIG welding system (SWS-1000) is a new arc welding system, which through the plasma arc effect, arc energy concentration, welding arc pressure and the molten pool liquid metal surface tension, forming a stable hole effect, with strong penetration ability, can once welding 12mm steel plate, is a kind of argon arc welding New welding process between (TIG) and plasma (plasma).

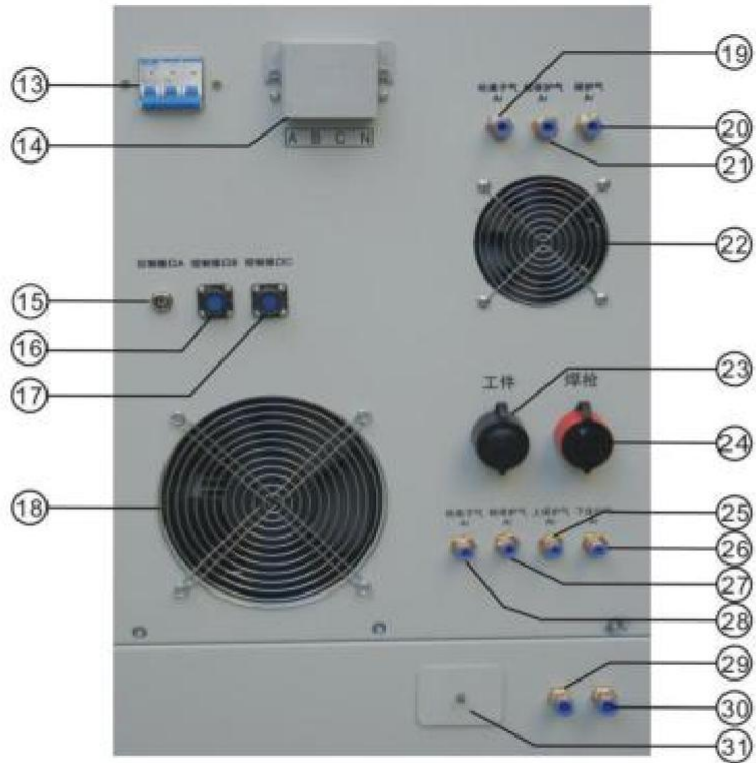


SYSTEM
COMPOSITION



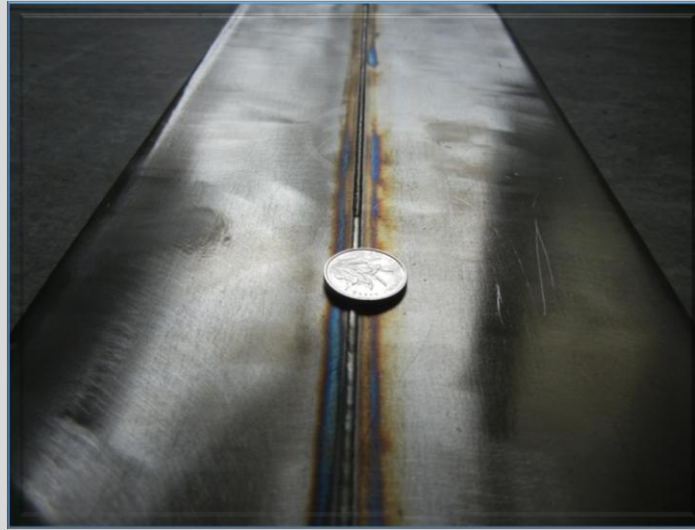
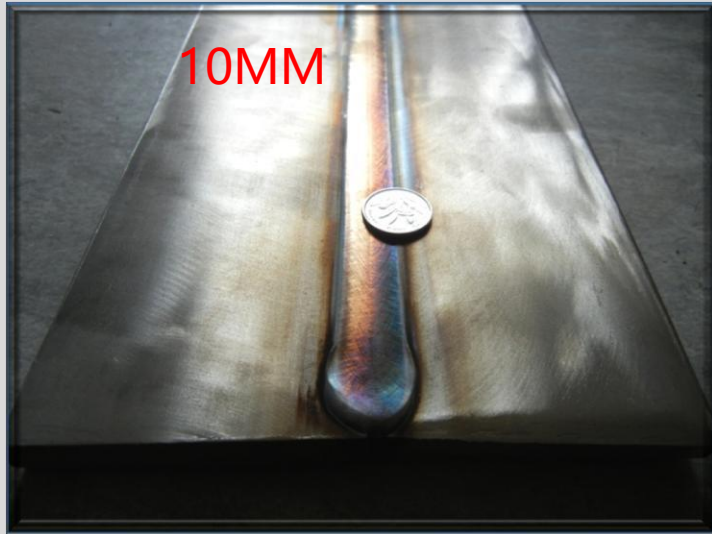
- ✦ Welding main power supply (built-in arc pressure tracking), refrigeration and cooling water tank, STIG welding gun, precision
- ✦ wire transmitter (optional)

The system integrates the welding main power supply, refrigeration water tank, arc pressure tracking and control system.

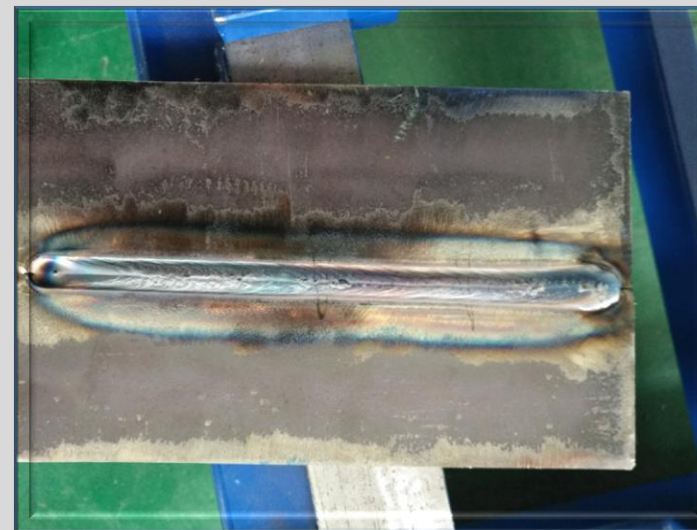


- 13.Main switch 14.Power input interface 15.Control interface A (including analog input)
 16.Control interface B 17. Control interface C 18. Fan 19. ionic gas input port 22.Fan
 23.Work piece output terminal 24.Torch output terminal 25. Upper shield gas output
 interface 26. Lower shield gas output interface 27.Torch shield gas output interface 28.
 Ion gas output interface 29. Cooling water inlet 30.Cooling water outlet 31.filler





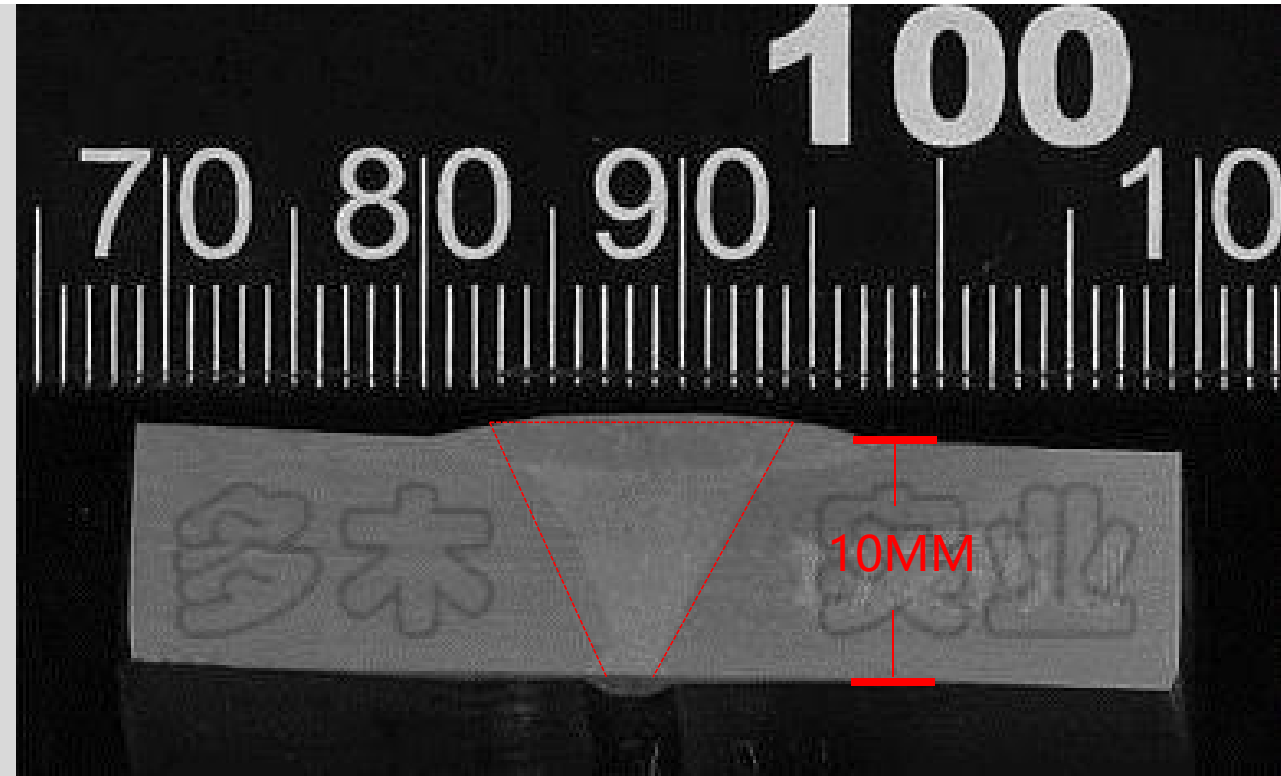
Material Thickness: 10mm	Material license number: 304
Welding wire material: no wire filling	Welding position: PA, single-face welding
Welding speed: 320mm / min	Slope Angle: 0
Plate gap: 0	Undercut: no



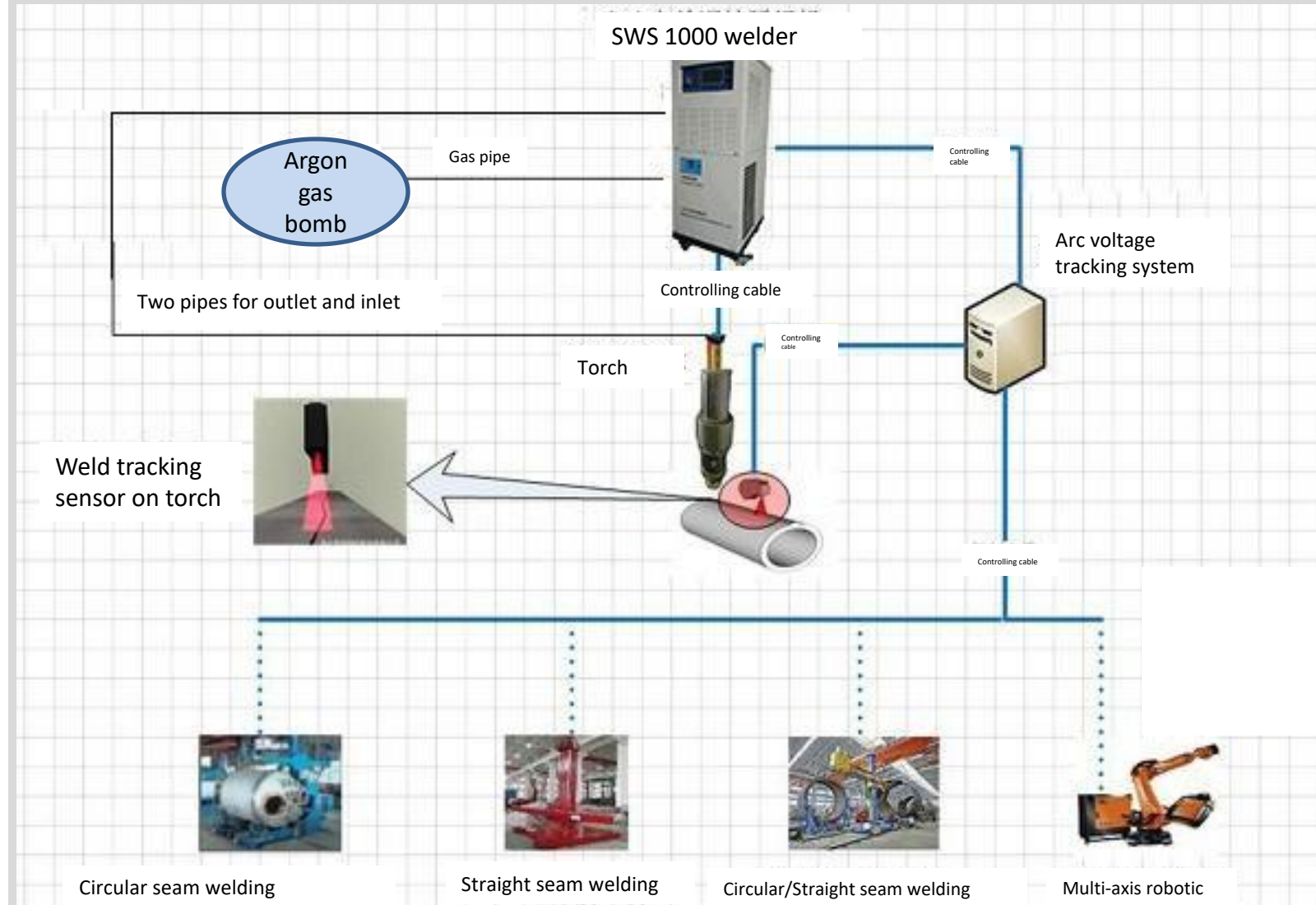
Material Thickness: 10mm	Brand number material: Q345
Welding wire material: no wire filling	Welding position: PA, single-face welding
Welding speed: 260mm / min	Slope Angle: 0
Plate gap: 0	Undercut: Slight

/ 03 / STIG Welding Features

STIG arc welding technology is a high-speed full penetration weld welding technology, in the case of 16mm of metal material (such as titanium alloy) without opening the slope, weld formation is perfect, single-sided welding double-sided molding, welding speed is 5-10 times that of ordinary tungsten pole argon arc welding technology. The width of the back weld is 2-3 mm, the width of the front weld is usually about 1.5 times the plate thickness, the weld is 100% mother layer, without multiple fusion lines, completely eliminate slag, pores and common weld defects. The corrugated-free welding melting pool with high-efficiency deep melting arc welding ensures the ultra-high quality of the cover layer, and there is no need for back root cleaning, surface polishing, cleaning and polishing.



/ 04 / SWS-1000 System Features

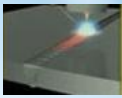









SWS-1000 type of high-deep melt STIG welding system adopts integrated design, welding power system, cooling system, arc pressure tracking system integration, simple equipment, low optimization failure rate, flexible and convenient operation.

The SWS-1000 high-deep melting STIG welding system has an arc pressure tracking system, which can automatically track the changes of the weld, ensure the constant distance between the tungsten electrode and the weld, increase the adaptability to the weld gap, and realize the consistency and high quality of the weld,

At the same time, the system has the communication function, can realize the seamless connection with the peripheral automation equipment, to realize the remote control of welding parameters (welding current change: current rise, drop, gas protection time setting: early gas delivery, lagging gas stop, etc.), to meet the needs of dynamic welding in the welding process, to realize the full automatic welding.

Green, high efficiency and high quality: fast welding speed, less welding material loss

Welding quality comparison			
Welding procedure	Welding method	After welding form	Summary comparison
TIG/GAWM			<ul style="list-style-type: none"> Multi-layer multiple filling welding, easy to appear slag clip, stomata and other phenomena The welding variable is large High skills and responsibility requirements for operating workers
STIG			<ul style="list-style-type: none"> The one-time qualified rate of weld film is less than 90%
			<ul style="list-style-type: none"> One-time welding penetration, no pores, slag clamp and other phenomena Double-sided molding, smooth and beautiful weld seam, small deformation amount Nail-section structure to enhance weld mechanical properties
			<ul style="list-style-type: none"> The one-time qualified rate of weld film-making exceeds 95%

Technical comparison			
Welding procedure	Joint form	After welding	Advantage contrast
TIG /GAWM			Filling welding area
STIG			Self-melting or fuse welding area Cover fill wire filling area
			The rest were all self-melting regions

Note: The above summary of the actual welding parameters for 10MM stainless steel

Material savings: 95%

Sum up

- Large consumption of welding materials, and the waste of slope materials
- Welding material filling consumption reaches 1,000 g / m
- Welding material consumes less or is not filled with welding material
- The filling amount of the welding material shall not be greater than 50g / m, or the traditional 5%

Note: The above summary of the actual welding parameters for 10MM stainless steel

Efficiency contrast							
Welding procedure	Cutting	Slope	Clean before welding	Joint	Welding front	Clean reverse	Welding reverse
TIG/GAWM	✓	✓	✓	✓	✓	✓	✓
STIG	✓	✗	✓	✓	✓	✗	✗

Welding speed of 300MM / MIN, one-time welding penetration, single-sided double-sided welding

Note: The above summary of the actual welding parameters for 10MM stainless steel



High speed, high quality, high efficiency

S W S-1000 high deep melt S TIG welding system is a high efficiency electromagnetic compression arc, High electric arc energy density, The welding process forms a stable small hole effect, Strong penetration ability, 10M M steel plate, Single-sided welding and double-sided molding, Beautiful weld joint, High welding efficiency and good welding quality, No pores, slag clamp and other phenomena, The single pass rate reached more than 95%, Fast welding speed, In the case of 10mm stainless steel, the welding speed of 300mm / min is more than 8 times that of ordinary TIG welding, Therefore, it has obvious advantages compared with the traditional GMAW / TIG welding technology.

The left chart is a data summary of the actual welding parameters of 10m m stainless steel:

SAVE MANPOWER AND MATERIAL
RESOURCES AND SAVE COST 5.2

Save manpower and material resources, save costs
SAVE MANPOWER AND RESOURCES, SAVE COST

The efficient welding of SWS-deep melt STIG welding system of type 1000 saves the cost of equipment, manpower and consumables, high quality welding, reduce air holes, slag and other phenomena, avoid later grinding and welding process, double sided welding, narrow welding width is about 2-3mm, saving a lot of human and material resources

The advantages of quality, efficiency and cost of low carbon steel thick plate welding and bottom technology of deep plate are also incomparable to other technologies, which have more competitive advantages than the traditional buried arc welding and G M A W.

Welding cost comparison 1 high melting equipment SWS1000=8 ordinary MIG (daily output)

Number	project	High melting depth (SWS1000)	MIG weld
1	Welding cost (Yuan / m)	15.6	57
2	Integrated welding speed (mm / min)	280	32
3	operate time (h)	8	8
4	Number of equipment sets (sets)	1	8
5	Production rate (m / day)	125	125
6	Daily welding cost (Yuan / day)	1950	7125

Comprehensive welding cost decreased by 3.5times

Note: Summary of the actual welding parameters for 10MM stainless steel





/ 06 / Application

Petrochemical industry (Petrochemical Industry)

Food and pharmaceutical industry (Food and Pharmaceutical Industry)

Aerospace

(Aerospace) Power industry, power plants (Power Industry, Power Plant)

Water treatment industry (Water

Treatment Industry)

shipbuilding (shipbuilding)

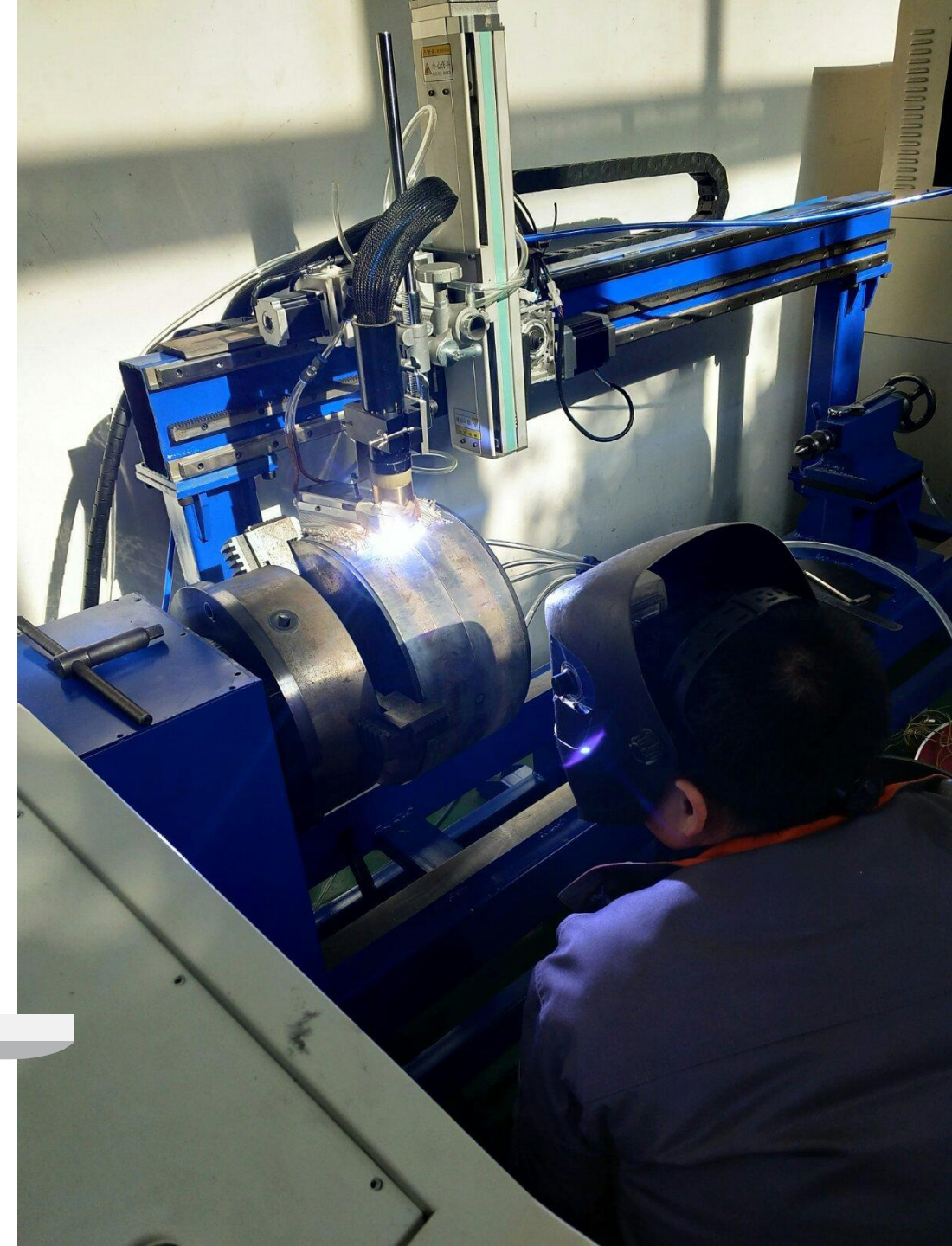
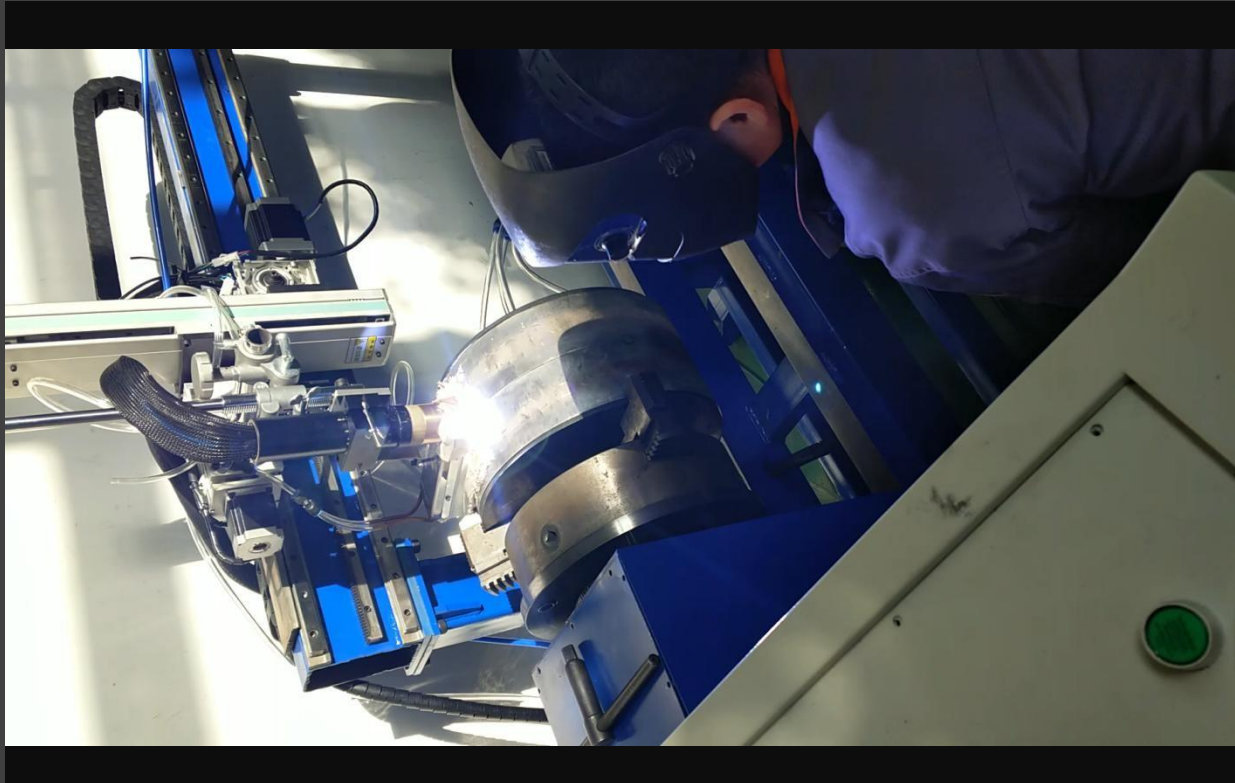
Boilers and pressure vessels (Boiler and pressure vessel)

It mainly includes: pipe, heat exchanger, pressure vessel, storage tank, reactor and other normal pressure and high pressure pipe vessel manufacturing process

Pipeline prefabrication and panel assembly in large infrastructure construction (prefabrication and plate of pipes in large infrastructure)

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HIGH SPEED, HIGH QUALITY, HIGH
EFFICIENCY



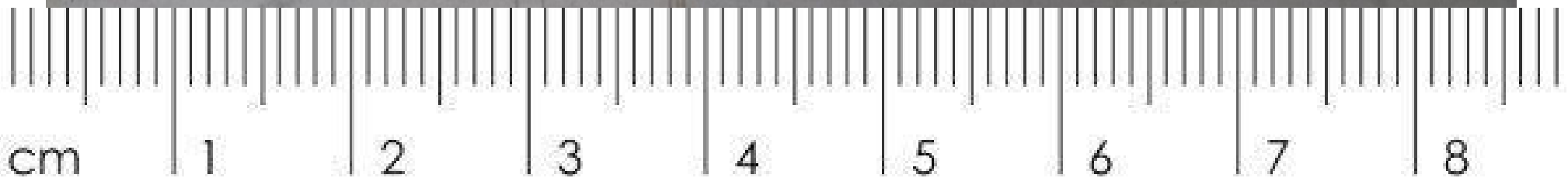
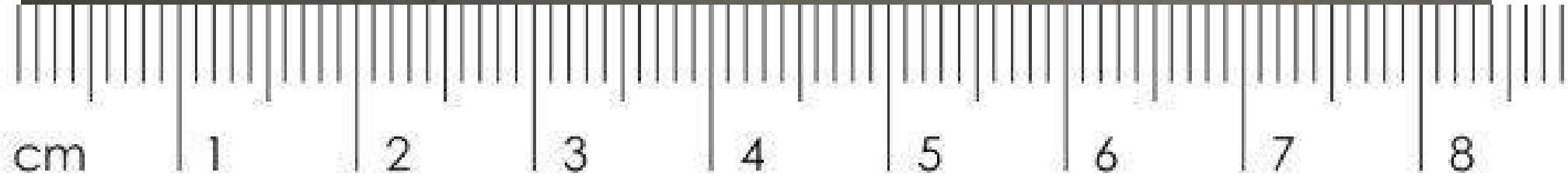
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HIGH SPEED, HIGH QUALITY, HIGH
EFFICIENCY



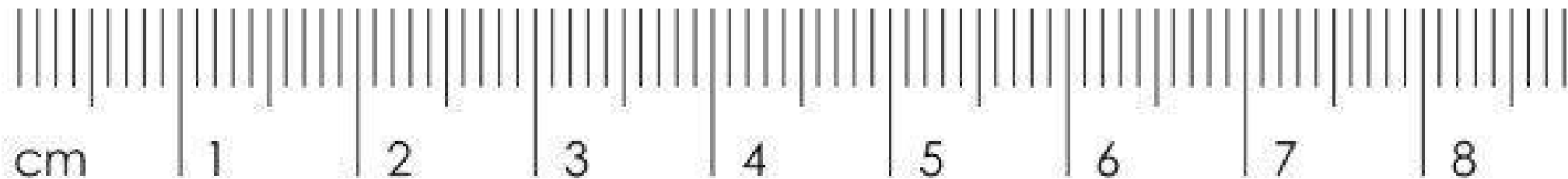
/07/ WELDING EXPERIMENT REPORT

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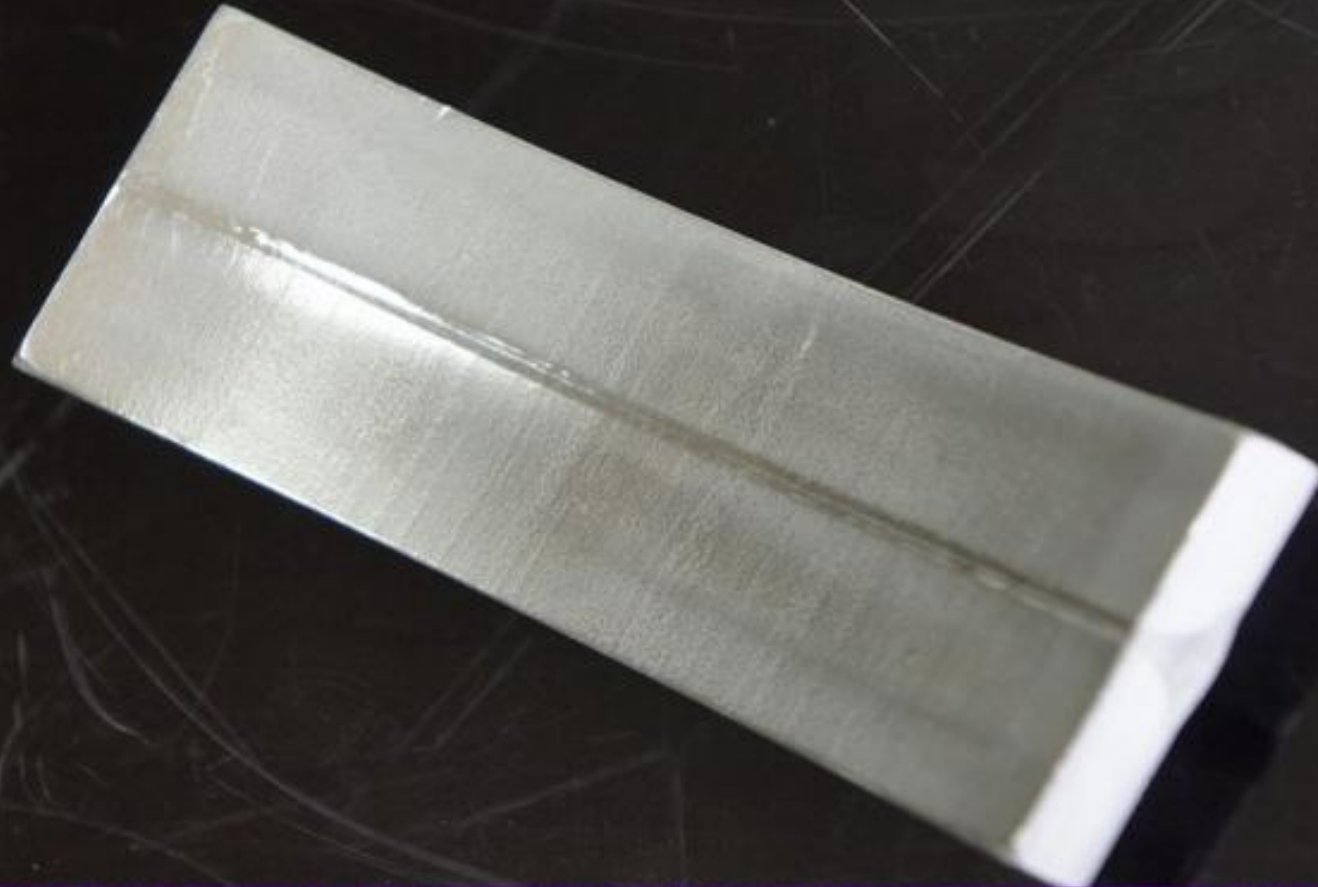




Bending
Test



WELDING EXPERIMENT REPORT



Soldering stainless steel, thickness: 12mm

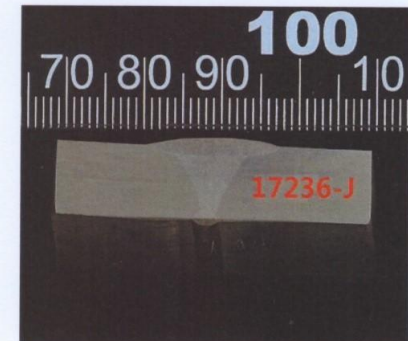
检测报告

Test Report

客户名称 Client	上海多木实业有限公司 Shanghai Multi-wood Industrial Company Limited		
客户地址 Address	上海市嘉定区马陆镇丰登路 615 弄 2 号厂房 2# Building Fengdeng 615 Road, Jiading District, Malu Town, Shanghai		
委托编号 Contract No.	17-236		
接收日期 Date of Acceptance	2017-11-27	检测日期 Date of Testing	2017-11-28
试件编号 Specimen No.:	17-236J		
执行标准 Execute Standard:	GB/T226-2015		
验收标准 Acceptable Standard:	NB/T47014-2011		
材料牌号 Base Metal Specification:	Q345B		
焊接方法 Welding Process:	钨极氩弧焊 GTAW		
腐蚀剂类型 Etch Solution:	氯化铁盐酸水溶液 Acidified ferric chloride solution		
检查结果 Results:	合格 Acceptable		

来样经宏观酸蚀显示, 焊缝、熔合线、热影响区均未发现裂纹、未焊透、未熔合、夹渣等焊接缺陷。附照片如下。

After macro-etching, no cracks, incomplete penetration, lack of fusion and inclusions are found in weld, fusion line and HAZ of specimen.



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OwE!D

THANKS

Product • Quality • Service

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