HEBEI SANSO MACHINERY CO.,LTD
河北三硕机电设备有限公司

THE INSIDE SCARFING SYSTEM

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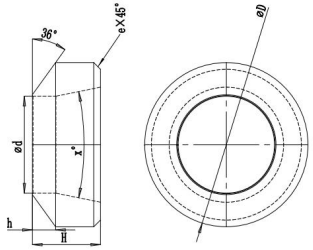

Inside scarfing insert specification

Model	Dimension(mm)			
	Tube diameter（mm)）	ΦD	H	Φd
HL00806**	Φ12~Φ17	8	6	4/5
HL01006**	Φ16~Φ20	10	6	5/6
HL01306**	Φ20~Φ36	13	6	7/8
HL01507**	Φ25~Φ42	15	7	8/9
HL01908**	Φ30~Φ60	19	8	10/11
HL02210**	Φ42~Φ70	22	10	12/14
HL02512**	Φ48~Φ76	25	12	12/15
HL03012**	Φ60~89	30	12	18/20
HL03515**	Φ76~Φ127	35	15	20/22/25
HL0401525	Φ108~Φ177	40	15	1/25
HL0451530	Φ127~Φ193	45	15	1/30
HL0451728	Φ133~Φ219	45	17	1/28
HL0501835	Φ159~Φ273	50	18	2/4
HL05518**	Φ219~Φ508	55	18	35/38
HL05520**	Φ273~Φ610	55	20	38/40
HL0652045	Φ325~Φ660	65	20	2/14
HL0702550	Φ426~Φ710	70	25	2/19

FIGURE-1

1:The inner scarfing system originated from Germany; it is simple in design and highly practical.

The inner scarfing system is made of high-strength elastic steel, which has the characteristics of high strength, high temperature resistance and corrosion resistanceafter special heat treatment,
It has small deformation and strong stability when working under high temperature conditions.
It is suitable for high-precision thin-walled welded pipes and has been used by many domestic welded pipe companies for many years.

2.The structure

① scarfing ring
② scarfing ring screw
③ guide roller
④ jacking screw for lower support roller
⑤ guide roller
⑥ connection rod
⑦ impeder
⑧ Traction cooling tube
⑨ Tool holder
⑩ lower support roller
⑪ water fittings

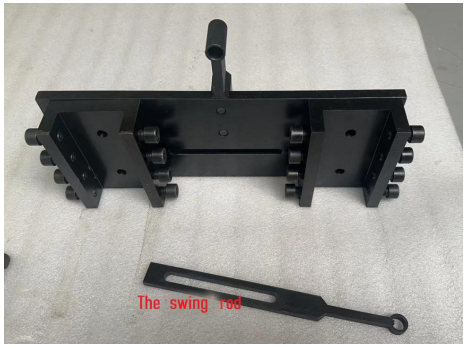

Figure-2
The adjustment bracket

3:The working principle of inner scarfing system

It will remove internal burr of tube at high temperatures,
it make the cleaned steel pipe meet the standard requirements.

FIGURE-3 , The bracket is installed on the fist fin pass

Working principle:

Put the inner scarfing system between the fist fine passs stand and welding section .
The adjustment bracket is installed on the fist fine pass stand(figure-3).the end of impeder (figure-1) should exceed the squeesing roller center line by 20-30mm, meanwhile, the scarfing ring is maintained between 2 outside burr sarfing tool the cooling water should be provided to the inner scarfing system at pressure 4--8Bar

4)The usage condition of inner scarfing systen

1)The good quality and flatness strip steel are required to manufacture steel tube
2)Some 4-8bar pressure cooling water are needed to cool the ferrite core of inner scarfing system
3)The welded seam of 2 end of strips must be flattness, it is better to grind the welded seam by angel grinder ,this can avoid scaring ring broken.
4)The inner scarfing systen removes the welded pipe material:Q235,Q215, Q195(or equivalent) . The wall thickness is 0.5 to 5mm.
5)Clean the lower support roller to avoid oxide skin of the stuck on lower support roller .
6)The accuracyof internal burrs after scarfing should be -0.10 to +0.5 mm.
7)The welded seam of tube must be stable and straight. add the lower support roller under the outer burr sacarfing tool.
.8)Make a proper opening angle.
9)The ferrite core with high magnetic flux should be used inside of imperder of inner scarfing system.it leads to high sppeed welding

5)The installation and adjustment of inner scarfing system

1)Simulated installation，。

Beforming feeding strip into forming and sizing machine ,place the inner scarfing system into forming and welding section (from first fine pass stand to welding section). it can help to ensure the impeder and scarfing ring in proper position .Meanwhile ,please keep in mind that the position of the jacking screw of lower support roller position. if the impeder or scaring ring in improper postion ,you can adjust theimper or tool holder position by adjusting the nut on the connection rold

2) the proper postion of impeder and scarfing ring.

The end of the impeder(figure-1) should exceed the the center line of squeezing roller by 20~30mm.

The scarfing ring should be between 2 outside burr scarfing tools

3) Adjusting the lower support roller height by adjusting the jacking screw.2 adjustment optiom for your reference.

A:First ,Calculate the inner diameter, and then adjust the jacking screw to make the the vertical distance between scarfing ring and lower sopport roller suite the inner diameter of tube .During adjusting the jackcsrew,measure the vertical diatance by a caliper.

Remark: Take a sample tube ,put the tool holder inside of the sample tube , to check whether the scarfing ring can press against the inner burr in a proper force.

Note: the diameter and thickness of a sample tube should be as the same as that of the tube you will manufacture.

B..Place the inner scarfing system into a sample tube .and then adjust the lower support roller by adjusting the jacking screw,to make the scaring ring press against the welded seamat proper force.After tightening the jacking screw, return jacking csrew by half a turn

Note: a):the diameter and thickness of a sample tube should be as the same as that of the tube you will manufacture.

b): to make hole on the tube and on the top of jacking screw , it helps to adjust the jacking screw easily

4) The installation of the adjustment bracket and inner scarfing syste,

The adjustment bracket is installed on the fist fine pass stand(figure-3) in a proper height. meanwhile ,place the inner scaring system in the forming and wekding secttion and then to make the cooling tube connect the vertical rod(FIGURE-2)

5) Feeding strip and adjusting the scarfing ring

After feeding strip into the forming and welding section. the scarfing ring should be aligned with inner weld seam, If not ,it should adjust the swing rold to make the scarfing ring is aligned with the inner welded seam.After adjustment . the swing rod should be fixed by screw nut.

6) to supply cooling water to the water cooling tube of inner scarfing system(water pressure :4-8Bar).to make the ferrite core is cooled fully.

After the adjustment and installation is done ,the tube will be manufactured

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