



Process description Seam conditioning for spiral fabrics

1. General

The weld preparation described below ensures that the pintle wire can be easily inserted during screen assembly to close the screen in the machine.

Tools

The following tools and materials are required for weld preparation:

- Tape measure
- Bent graver
- Flat steel (approx. 50 x 5 x 400mm) as a working surface
- Scissors
- Marker
- Paint roller
- Marking paint
- Marking templates (according to customer specifications, e.g. arrow)
- Spray lubricant
- Hand edge welding machine

A stable, appropriately sized workbench should be used as a workstation.

2. Preparation

The fixed screen with bonded edges is then measured according to the specifications of the job and cut to length by pulling a pintle wire.

Care must be taken to ensure that opposite-sided spirals are located at the ends. See figure A.

The screen's ultimate rotational direction results from the throughput direction of the screen during thermal fixing. The resulting pulling force creates a light curve in the spirals that can only be seen from the side. This curve is exaggerated for demonstration in Figure A.

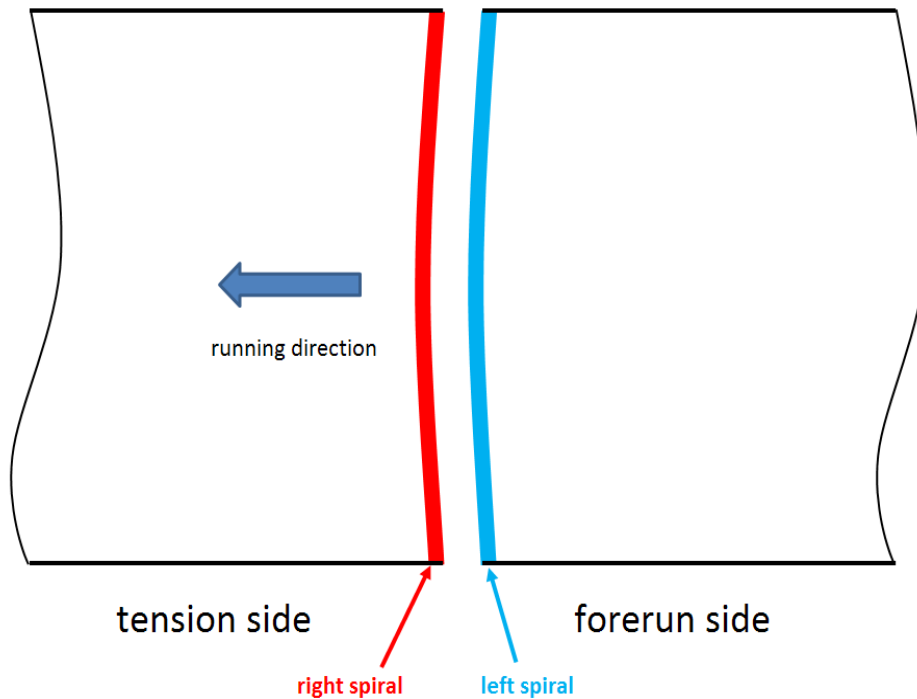


Figure A

The smoother roller side is used for the upper side (later the paper side). The ultimate rotational direction depends on the pull side and the feed side according to Figure A.

Both ends of the screen are then placed on the workbench and secured with clamps so the welding area can be easily reached. See image 1



Image 1

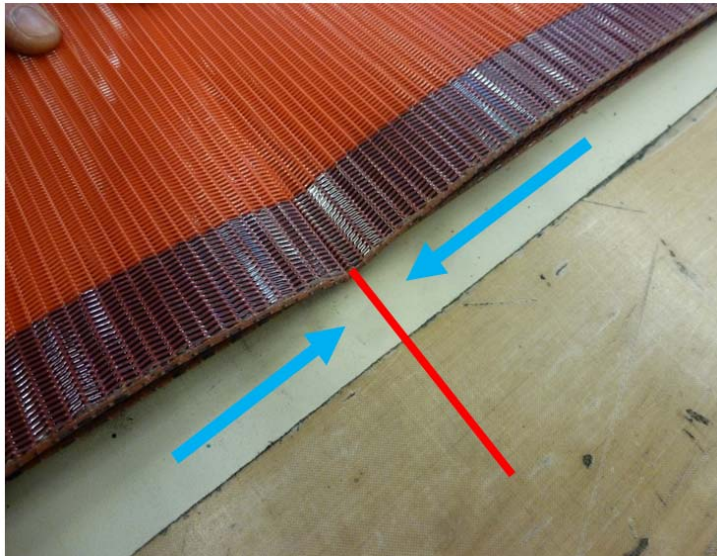


Image 2

Both screen ends should now match exactly on **both sides** without overlapping Image 2. If this is not the case, this part of the screen will be permanently sealed with a few double spirals and a different area will be opened.

3. Seam conditioning

Once the screen has been accordingly positioned on the workbench using the flat steel as a working surface, a graver is used to free the front spirals from the edge adhesive – carefully and without using force (Figure B, red areas).

Make sure that the spirals are not damaged while removing the edge bonding!

On the backside of the spiral, the graver is inserted between two loops and pushed forward diagonally and the bond is pushed out between these two loops. The graver should not be inserted too deeply to avoid damaging the loops that run underneath. See Figure B, red arrow.

Caution: risk of injury! Always work with the graver pointing away from the hand holding it. Image 3

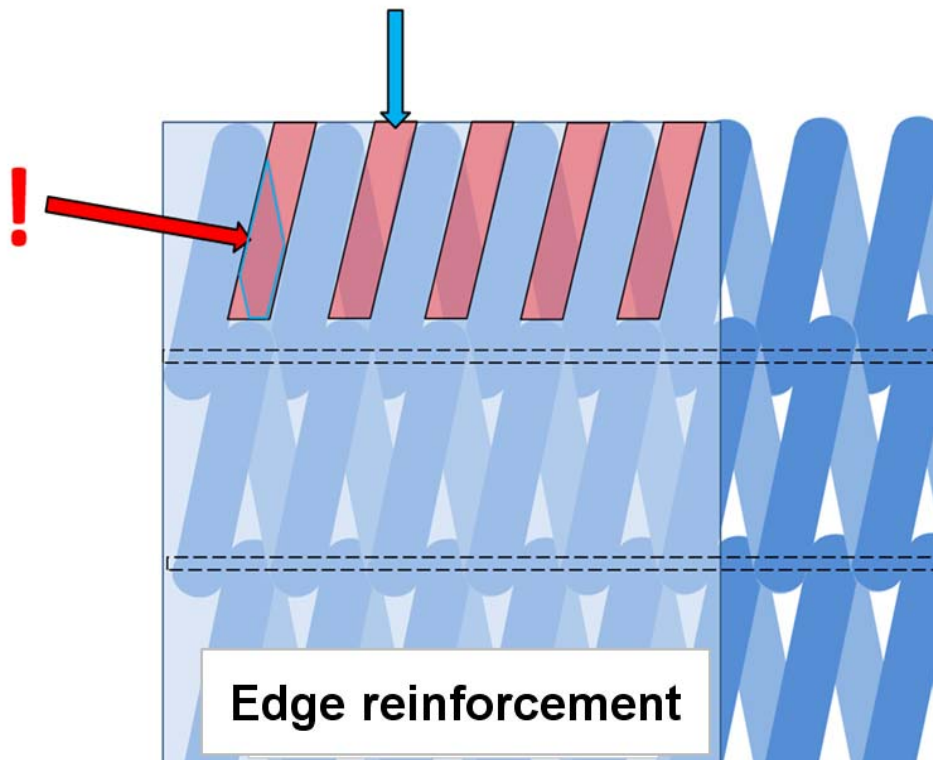


Figure A



Image 3

This process is then repeated through all coils to completely remove the bond.

The scissors are then used to slightly trim the bond edge, as shown in image 4. This means that the outer spiral is shortened to prevent the screen from snagging on buttons or guiding elements in the machine and being damaged.

As described above, the same process is repeated with the other three seam areas. The hand edge-melting device is then used to carefully and cleanly round the new edges on the bond.

The seam is then lightly (!) sprayed with a lubricant (e.g. *saBesto HHS Lube* from WÜRTH ®) to make insertion of the pintle wire easier when the screen is assembled.

Image 4 shows the finished seam.

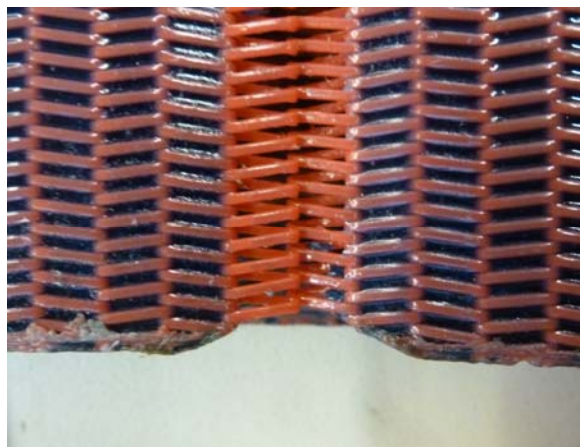


Image 4

4. Marking and labelling

The scope and content of labelling are described in the production order according to customer specifications.

The following will describe the addition of a directional arrow which is usually required.

Before labelling, the screen is temporarily closed with a pintle wire (e.g. B. PET Ø 1.0mm).

The machine direction was already determined when positioning the screen on the workingbench and is visible in Figure A.

3 markings are initially made on the closed seam so that any misalignment will be immediately recognised and corrected during screen assembly. 6cm-long lines are drawn with a permanent marker (e.g. EDDING ®) 10 cm from the edge and on both sides of the seam and once in the middle serve as reference markings (Figure C).

The four directional arrows are now applied before and after the seam in the machine direction as shown in Figure C.

The arrow template is placed on the edge of each screen and the arrows are drawn lightly using a paint roller and marking paint. Image 5

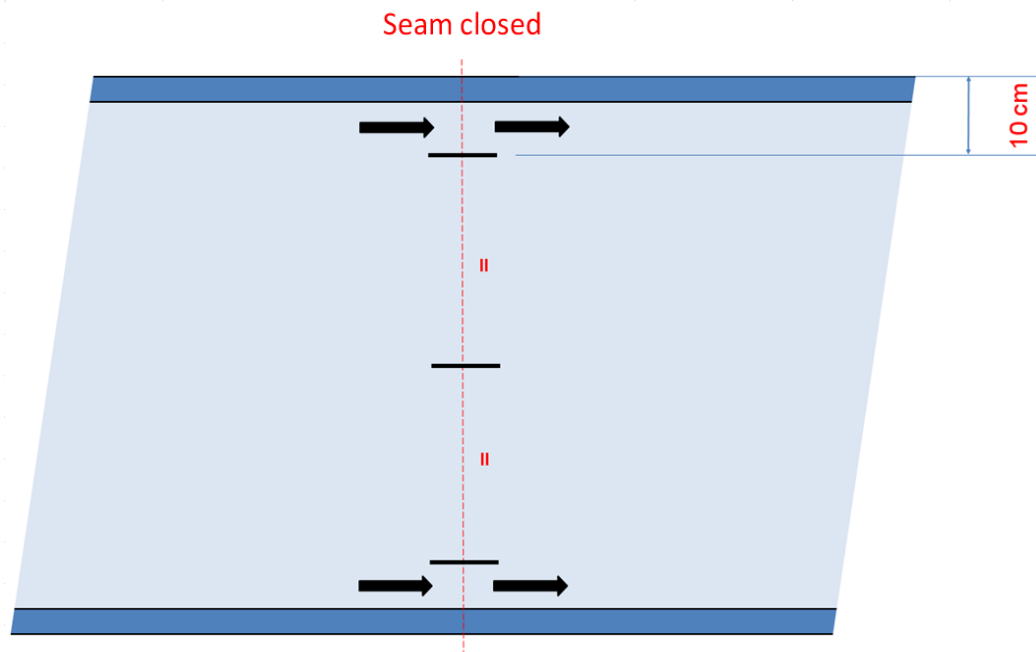


Figure C

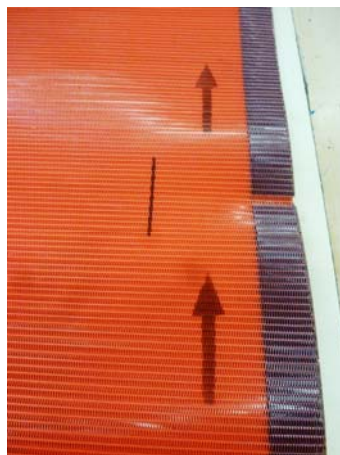


Image 5

The seam and labelling are now complete. If no other joining work is necessary, such as Velcro and/or forerunners, the screen can now be rolled up and packaged according to the production order.