PFAFF® Industrial

KSL

NEW:

Real-time regulation and quality control
of the seam course STITCH by STITCH

Areas of application:

Topstitching of decorative seam designs
on partially and fully perforated leather and fabric

Innovative benefits:

- Perfect seam appearance through compensation of tolerances in material and perforation
- Process-reliable seam guidance
- Minimization of scrap and customer claims
- Reduced processing costs through timely removal of faulty base material
- Relief of operating personnel by compensation of loading inaccuracies

Technical Features:

- 100 % documentation of the seam quality for your customer
- Detection of damages and contaminations on material surface (e.g. color deviations, scratches, scars, contaminations)
- Color monitoring of the stitched material and thread
- Monitoring of seam quality & detection of skipped stitches
- Verification of correct perforation/punching pattern

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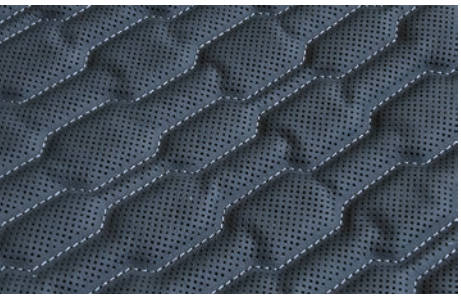
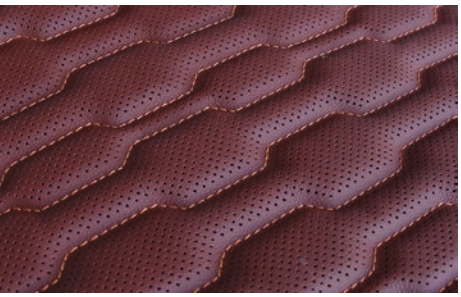
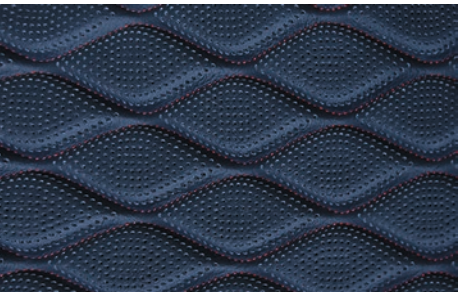






Significant increase in process reliability and quality

REAL TIME and STITCH BY STITCH the AI Online Vision System ensures the control and optimization of the seam pattern between the perforation. Position tolerances of the perforation are detected and the seam path is corrected before the needle is inserted. Operator influences are minimized and operator burdens are reduced. Maximum quality results can thus be achieved**.**

Seam correction via artificial intelligence and targeted simulations

Artificial intelligence and specific textile simulation tools determine the influencing factors for active seam path correction. Ideally, the teach-in of the vision system is reduced to a single part. The full online functionality guarantees the fastest possible execution of the sewing operation without system-related sewing stops or separate scanning processes. This ensures manufacturers the shortest set-up and cycle times as well as a significant reduction of rejects as well as saving in time and money!

Pre-Scanning ensures quality - even before the sewing operation is started

Optional pre-scanning identifies the part and the quality of the inserted parts. Errors in the perforation and leather or excessive tolerance deviations in the geometry result in an immediate rejection without starting a sewing process. Quality problems in the sewing process are detected online by a downstream Vision Camera at the sewing head and the sewing process is automatically stopped.

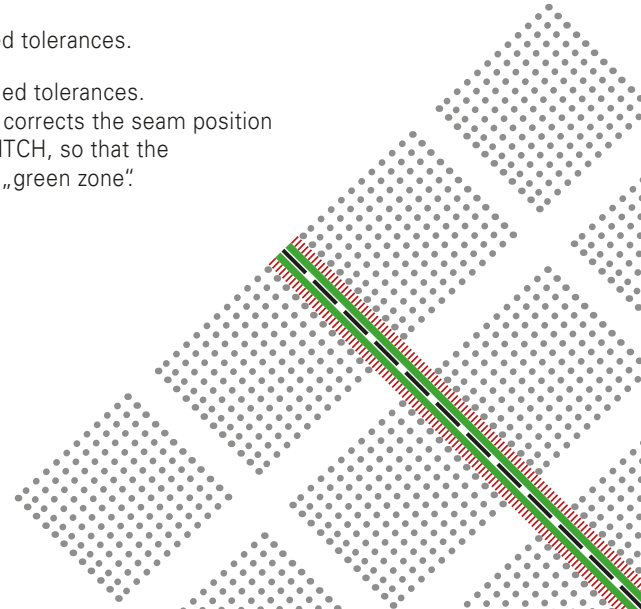
Documented, monitored quality

The vision data generated is available for training and continuous improvement of the artificial intelligence algorithms. They also serve to document the quality achieved in the process. Essential quality parameters such as thread color, thread tension, skipped stitches and the thread position in the stitch can also be recorded and used for quality control/ documentation.

Method of operation:

Seam contour within the specified tolerances.

Seam contour outside the specified tolerances.
AI-based Online Vision System corrects the seam position in REAL TIME and STITCH BY STITCH, so that the seam position is always in in the „green zone".



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