BLINDSTITCH SEWING MACHINES IN THE WORLD SEWING EQUIPMENT MARKET

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Abstract: The blindstitch sewing machine are used for different sewing operations: hemming and felling operations, beltloop manufacturing, padding, spot tacking, blind stitching of double side/face seams. The web-sites of sewing equipment producers were analyzed to see the availability of blindstitch sewing machines in the world’s market. 68 manufacturers from 143 researched companies produce one or more types of blindstitch sewing machines. The blindstitch machines of stitch 103 are manufactured the most often. The machines of stitch class 300 are developed for specific applications manufacturing men suits. The companies Strobel and Maier are most well-known blindstitch machine manufacturers. The company Strobel has widest offer of class 300 blindstitch machines. The company Maier produces sewing machines for industrially manufactured and tailored clothing, as well as, for manufacturing home and technical textile goods.

Keywords: blindstitches, special sewing machines, sewing equipment manufacturers, world market.

MAŠINE SLEPIH UBODA NA SVETSKOM TRŽIŠTU OPREME ZA ŠIVENJE


Ključne reći: slepi ubodi, specijalne šivaće mašine, proizvođači opreme za šivenje, svetsko tržište.

1. INTRODUCTION

Blindstitch sewing machines belong to group of special sewing equipment that are used to create invisible seams on face side or both sides of garments in qualitative and industrially effective way [1,2,3]. Comparing with other kind of sewing machines, for example, lockstitch, interlock or overlock machines, blindstitch machines are less used and are more specific in their application. The most often the invisible seams are created on classical style garments from medium thickness textiles, such as, skirts, trousers, blazers, coats. Their widest and most important applications are found in men suit manufacturing process [4,5]. However, there are also available blindstitch machines to process very light fabrics, for example, machines for hemming scarves and summer dresses.

To get invisible seams from one fabric side blindstitch machines are equipped with curved needles
Depending on a stitch type and the mechanism of the machine, the needle moves left-right or forwards-backwards creating a seam. The needle of the single thread machines of stitch class 100 perform the movement left-right, while the needle mechanism of two thread machines of stitch class 300 perform the movement forwards-backwards [4,5].

The blindstitch sewing machine are used for different sewing operations:

- hemming operations (stitch type 103, 105, 313), [6],
- felling operations - waistband felling (stitch 103), bookseam felling (stitch 103), felling hems of lining (stitch 313), felling of sleeve lining (stitch 317), felling lining in an armhole (stitch 317), felling undercollar (stitch 314),
- other special operations - beltloop manufacturing (stitch 103), padding (stitch 103), spot tacking (stitch 103), blind stitching of double side/face seams (stitches class 313), others.

The web-sites of sewing equipment producers were analyzed to see the availability of blindstitch sewing machines in the world’s market. It was found that almost half - 68 manufacturers from 143 researched companies - produce one or more types of blindstitch sewing machines. The blindstitch machines of stitch 103 are manufactured the most often (47%). Other types of researched blindstitch equipment: machines of stitches - 105, 313, 314 and 317 are available much less [6].


2. MACHINE OS STITCH TYPES 103 AND 105

In professional literature the machines of stitches 103 are called single blindstitch machines, as the seam is created by a single thread (see Fig.2). They use to be developed for universal or special applications. All 68 companies which produce blindstitch machines in their offer have universal use machines of stitch 103 for single folded material hemming operations manufacturing different kind of garments: skirts, dresses, trousers, coats, others (see Table 1).

Only 10 companies offer special application blindstitch machines of stitches 103. They are developed for following technological operations:

- beltloop sewing for work-wear and denim clothing (Strobel, Maier, AMF Frees, Japsew, Union Special, New-tech, Foxsew, Topsew, Global, Yamato, Eagle Special).
- waistband felling manufacturing men trousers (Strobel, Maier, Japsew, Global, AMF Reece),
blind spot tacking machines for invisible fixing together two or more fabric plies manufacturing men suits, others (Strobel, Maier, Japsew, New-tecH, Foxsew, Alpha, Union Special, others.

- flat and roll-padding for lapels, collars, chest pieces and interlinings of jackets and coats (Strobel Maier, Union Special, Yamato, Pezer).

- bookseam felling manufacturing blazers without linning (Strobel, Maier, Union Special, Yamato)

- rolled edge hemming manufacturing scarves (Strobel),

Blindstitch machines of cik-cak stitches 105 are also used for single folded material blind hemming. However, they create a seam that is fully hiding in between two fabric plies (see Fig.3). In professional literature they use to be called single thread double blindstitch hemming machines and bluff edge/side blindstitch machines. The machines of stitches 105 are produced by 6 of the researched companies: Strobel, Maier, Japsew, Foxsew, Tysew, Alpha.

3. MACHINES OF STITCH TYPES 313, 314 AND 317

The machines of stitch class 300 are not widely available in sewing equipment market. They are developed for specific and narrow application manufacturing men suits. The seams are created from two threads - a curved needle thread and a shuttle thread. As the thread must not go through all fabric plies, a shuttle with its thread is fixed behind the needle above a stitch plate, not under it. The needle swings forwards and backwards in the direction of the seam. Only three of researched companies are producing blindstitch sewing machines of stitch class 300: Strobel, Maier and Japsew.
Machines of cik-cak stitches type 313, are typically used for felling lined and unlined jackets manufacturing men suits [5], (see Fig.4). Such special application sewing machines are produced by companies: Strobel, Maier and Japsew. Machines of V-shape stitches 314 are created by under-collar felling machines produced by company Strobel [5], (see Fig.5). The seams of stitches 317 are created by two kind of special use sewing machines - machine for felling the lining into the armhole and machines for felling lining of sleeves [5]. The both types of the blindstitch machines are manufactured by company Strobel.

4. THE MOST WELL-KNOWN PRODUCERS OF BLINDSTITCH SEWING MACHINES

Currently in the world sewing machines market there are two companies that have the widest offer of blindstitch sewing machines. They are German companies Strobel and Maier (see Table 1).

4.1. Company Strobel

The German company Strobel has long history in development and manufacturing of blindstitch sewing machines [7]. In 1883 the company with its owner Johannes Strobel started sewing machine repairing business. Only after 30 years, in 1919, they switched to manufacturing of sewing machines - they started to design and produce special application machines which create invisible seams on a face side of a garments. During all these years the company has improved and widened the sewing machine offer for their consumers in clothing industry. They have manufactured: single and two thread blindstitch machines for hemming and other specific operations, blindstitch bartacking machines, machines for fur manufacturing, single thread button sewing machines, overlock sewing machines for shoe industry. Currently their widest offer is developed for men outdoor clothing: two-thread felling machines for linings of hems and sleeves of jackets/coats, single thread hemming machines, single-thread felling machines for waistband lining. They are only producers of stitch class 300 widest special application blindstitch machines (see Table 1).

4.2. Company Maier

From 1923 the owner of the company Wilhelm Maier with its team were making spare parts for sew-
ing machines. Only in 1957 the company started to manufactured sewing machines - they developed the first blindstitch machines which were successfully sold in the market. During the following years the company was producing also button holing and attaching machines, scallop stitch machines and different kind of blindsitch machines.

Currently company Maier produces sewing machines for industrially manufactured and tailored clothing, as well as, for manufacturing home and technical textile goods. They have put special accent to development of hemming and felling blindstitch machines for very wide range of application (see Table 1). In their offer there are hemming machines for different thickness material processing - from men coat and jacket manufacturing, hemming of home and technical textiles (curtains, quilts, duvets, car seats), up to hemming of very light fabrics manufacturing summer dresses, skirts, blouses and scarves.

5. CONCLUSIONS

Researching the world’s market of sewing machines it was found that only half of companies produce one or more kind of blindstitch machines. Their offer is following:

- 68 from 143 companies are manufacturing only one type of blindstitch sewing machines - universal application hemming machines of stitches 103.
- The second large group of available blindstitch machines are developed for men suit manufacturing. They are special application machines for

<table>
<thead>
<tr>
<th>Application</th>
<th>Strobel</th>
<th>Maier</th>
</tr>
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<tbody>
<tr>
<td>1. Spot tacking/point loom, lapel point tacking</td>
<td>101 560-11, 560-21</td>
<td>610, 610-2, 660</td>
</tr>
<tr>
<td>2. Hemming</td>
<td>103 VEB100-2, VEB100</td>
<td>Series of: 221, 241, 251, 271</td>
</tr>
<tr>
<td>Hemming of sleeves</td>
<td>103 170-22FD</td>
<td>251, 251-31, 252, 271, 271-32, 352</td>
</tr>
<tr>
<td>3. Trousers waistband felling</td>
<td>103 VEB100-3</td>
<td>250-32</td>
</tr>
<tr>
<td>4. Roll hemming light fabrics</td>
<td>103 VEB100-4</td>
<td>221-23/1</td>
</tr>
<tr>
<td>5. Hemming seam allowance of unlined jackets (bookseaming)</td>
<td>103 VEB100-5</td>
<td>221–18/1</td>
</tr>
<tr>
<td>6. Felling of fusible tapes</td>
<td>103 VEB100-6</td>
<td>251-41</td>
</tr>
<tr>
<td>7. Felling lining, facing, pocket pouch, hemming trousers</td>
<td>103 170-22FD</td>
<td>251</td>
</tr>
<tr>
<td>8. Roll and flat padding/roll pricking of collars, lapels, others</td>
<td>103 58-4D</td>
<td>230</td>
</tr>
<tr>
<td>9. Automatic roll padding/pricking</td>
<td>103 KA-ED</td>
<td></td>
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<tr>
<td>10. Belt loop sewing</td>
<td>VEB100-7</td>
<td>221-19/2, 221-19/2-B/1K, 221-19/2-B/2K, 221-19/4</td>
</tr>
<tr>
<td>11. Double blindstitch (bluff edge) felling, hemming of half lined jackets/coats</td>
<td>105 VEB200-2, 45-223, 45-123</td>
<td>352</td>
</tr>
<tr>
<td>12. Lining felling on jackets/coats and felling of fabric hems of half-lined jackets/coats</td>
<td>313 710 series</td>
<td>512</td>
</tr>
<tr>
<td>13. Felling under-collars of jackets/coats</td>
<td>314 718, 218D</td>
<td></td>
</tr>
<tr>
<td>14. Sleeve lining felling machines</td>
<td>317 328D, 327D</td>
<td></td>
</tr>
<tr>
<td>15. Felling the lining into the armhole</td>
<td>317 325-40D-TP</td>
<td></td>
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</tbody>
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felling, hemming, padding, spot tacking and belt loop sewing operations with stitches classes 100 and 300.

- There were found 4 largest blindstitch machine manufactures: German companies Strobel and Maier, Japanese company Japsew and Chinese company Foxsew.
- German company Strobel has widest offer of special application blindstitch sewing machines of stitches class 300 for men suit manufacturing process.
- German company Maier has widest offer of felling and hemming blindstitch machines for different thickness materials manufacturing clothing, home and technical textile goods.

REFERENCES


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