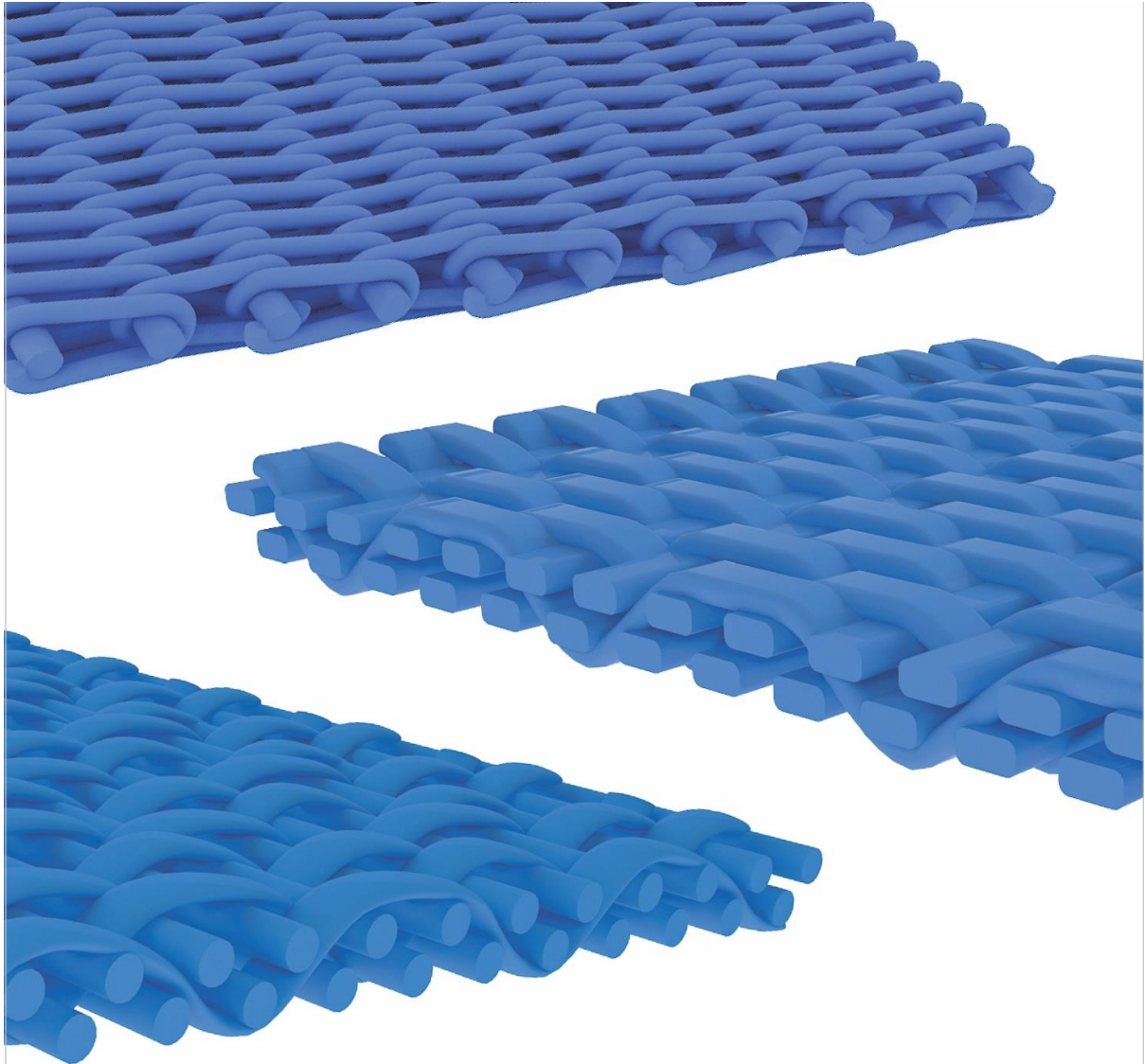




DRYER FABRICS

Powered by Innovation,
Driven by Values



THERMODRI

THERMODRI is a standard dryer fabric with large flat monofilament MD yarn in air permeability range of 350 to 400 CFM.

Two and half layer construction, with high void and heat and hydrolysis resistance fabric offered in a wide range of conventional dryer sections of medium and high grammage paper of writing printing grades.

APPLICATION

- Suitable for conventional dryer groups of slow and medium speed machines making writing printing paper and for high grammage grade duplex board
- Suitable for conventional dryer groups having low or insufficient pocket ventilation

ADVANTAGES

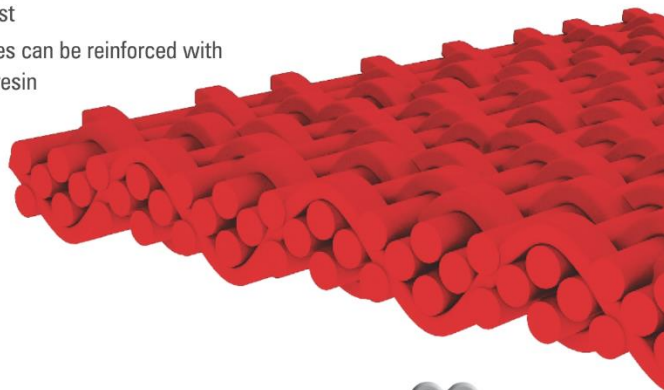
- Excellent stability and durability
- Stays clean and maintains permeability for longer time
- Maximizes heat transfer and facilitates better abrasion resistance
- Facilitates high evaporation and results in high drying
- Higher seam strength
- Easier to seam on machine and better resistance to edge raveling

FEATURES

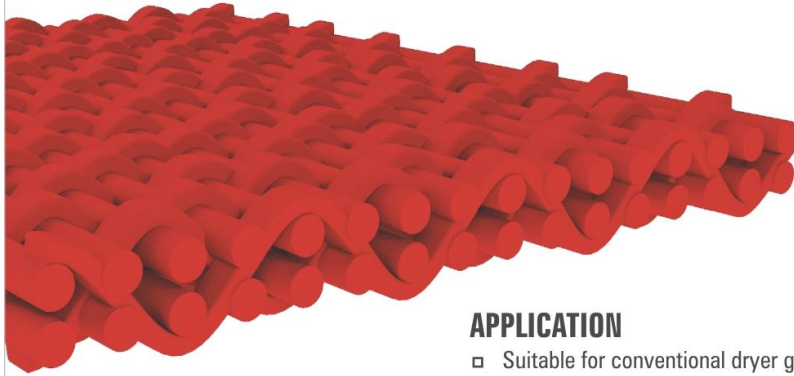
- Two and half layer construction
- All mono construction
- Large flat MD yarns
- More void and high air permeability
- Double density pin spiral seam
- Can be provided with zip seam assist
- Edges can be reinforced with PU resin

TECHNICAL SPECIFICATIONS

- Airpermeability : 350-400 CFM
- Basis weight : 1280 -1310 GSM
- Caliper : 2.00 mm
- Weave : 2.5 layer
- Seam : Pin-spiral seam




FELTS



THERMOPLUS

THERMOPLUS is a standard dryer fabric with large flat monofilament MD yarn in air permeability range of 500 to 550 cfm.

Double layer construction, with high void and heat and hydrolysis resistance fabric offered for a wide range of conventional dryer sections for medium and high grammage paper of all grades

APPLICATION

- Suitable for conventional dryer groups of slow speed machines making writing and printing paper
- Suitable for conventional dryer groups having low or no pocket ventilation
- Suitable for high grammage grades like kraft, grey board and duplex board

ADVANTAGES

- Excellent stability and durability
- Stays clean and maintains permeability for longer time
- Maximizes heat transfer and facilitates better abrasion resistance
- Facilitates high evaporation and results in high drying
- Resists plugging and contamination and high seam strength
- Easy to seam on machine and better resistance to edge raveling

FEATURES

- Double layer construction
- All mono construction
- Large flat MD yarns
- More void and high air permeability
- Open structure
- Double density pin spiral seam
- Can be provided with zip seam assist
- Edges can be reinforced with PU resin

TECHNICAL SPECIFICATIONS

- Airpermeability : 500 - 550 CFM
- Basis weight : 1090 -1120 GSM
- Caliper : 2.00 mm
- Weave : Double layer
- Seam : Pin-spiral seam



THERMOPLANE

THERMOPLANE is a standard dryer fabric with fine flat MD yarn for fine and newsprint grades applications in broad air permeability range.

MD float yarn structure for fine smooth surface with high percentage of sheet contact area. Fabric with all mono construction ensures better sheet control and maintains sheet quality.

APPLICATION

- Standard dryer fabric for conventional dryer groups of machines critical / sensitive for sheet marking and sheet quality
- Suitable for after size-press dryer positions for LWC printing paper
- Suitable for uniron positions of medium and slow speed machines

ADVANTAGES

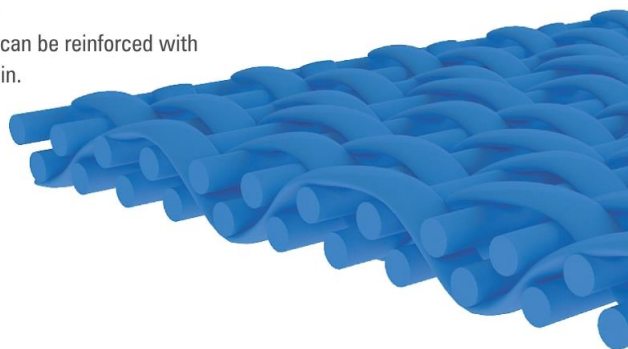
- Better heat transfer and lesser risk of sheet marking.
- Good abrasion resistance and very good stability
- Uniform sheet moisture profile and consistent evaporation
- Stays clean & easy to clean and no seam mark and high seam strength
- Easy to seam on machine and better resistance to edge raveling

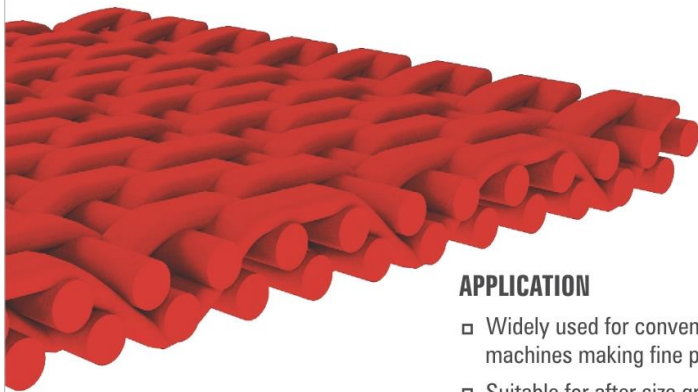
FEATURES

- All mono construction
- Smooth fine surface
- Float weave construction
- Maintained air permeability
- Double catch & fine pin spiral seam
- Can be provided with zip seam assist.
- Edges can be reinforced with PU resin.

TECHNICAL SPECIFICATIONS

- Permeability : 100-250 CFM
- Basis weight : 1050-1200 GSM
- Caliper : 1.65 – 1.75 MM
- Weave : 1.5 Layers
- Seam : Fine pin-spiral (Inline seam)





THERMOSTAR

THERMOSTAR is a standard dryer fabric with larger flat monofilament MD yarn in air permeability range of 150 to 250 cfm. Large flat MD yarns combined with long float weave creates extremely stable structure and a surface with high contact area on paper side



APPLICATION

- Widely used for conventional dryer groups of medium and high speed machines making fine paper and newsprint.
- Suitable for after size group dryer positions making LWC fine paper.
- Suitable for medium & slow speed unrun positions not critical for sheet blowing

ADVANTAGES

- Better heat transfer and maintains drying and maintains sheet quality
- Stays clean and maintains permeability for longer time
- Improved abrasion resistance
- Lesser risk of sheet marking and excellent dimensional stability
- More void volume providing higher evaporation
- High seam strength and easy to seam on machine
- Better resistance to edge raveling

FEATURES

- All mono construction
- Robust construction with large MD flat mono
- Float weave construction
- Double density pin spiral seam
- Edges can be reinforced with PU resin
- Can be provided with zip seam assist
- High contact area on paper side
- Smooth paper side surface
- Reduced air carrying

TECHNICAL SPECIFICATIONS

- Airpermeability : 150-250 CFM
- Basis weight : 1160 -1200 GSM
- Caliper : 1.80 mm
- Weave : 1.5 layer
- Seam : Fine Pin-spiral (Inline seam)



THERMOLINK-C

THERMOLINK-C is constructed out of polyester spiral coils, interconnected to each other by cross wise polyester monofilaments.

THERMOLINK-C is more flexible length wise and highly stable cross wise.

The entire screen is hydrolysis resistant. The structure is knuckle less and surface is 100 % flat.

APPLICATION

- Widely used dryer fabric for all dryer positions of liner and flutting kraft, and grey board machines
- Suitable for duplex board in later dryer groups

ADVANTAGES

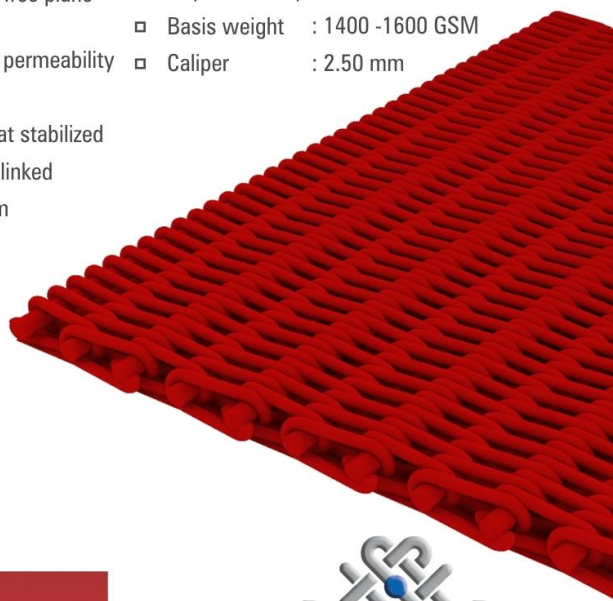
- Higher surface contact area. Very good resistance against abrasion and moist heat
- Extremely good ventilation and effective drying
- Easy for installation
- No thermal shrinkage /elongation. Maintains properties for longer time against heat and moisture
- Easy to seam on machine. Very high resistance to plugging and contamination
- Can be rejoined easily at customers end damaged
- No risk of seam failure and seam marking

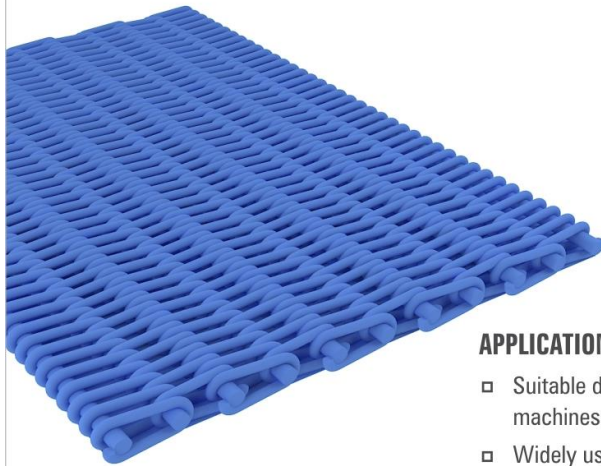
FEATURES

- Knuckle free plane surface
- High air permeability
- Flexible
- High heat stabilized
- Spirally linked
- No seam

TECHNICAL SPECIFICATIONS

- Airpermeability : 900 - 1000 CFM
- Basis weight : 1400 -1600 GSM
- Caliper : 2.50 mm





THERMOLINK-F

THERMOLINK-F is constructed out of polyester spiral coils, interconnected to each other by cross wise polyester monofilaments.

THERMOLINK-F is more flexible length wise and highly stable cross wise.

The entire screen is hydrolysis resistant. The structure is knuckle less and surface is 100 % flat.

APPLICATION

- Suitable dryer fabric for dryer positions of liner and fluting kraft machines
- Widely used on duplex board machines, primarily against the back side of the board and on both sides of the board in later dryer groups
- In later dryer groups on machine producing fine paper at speed up to 500 MPM
- In all dryer groups making writing and printing grades from 100 % recycled fibres, up to machine speed of 300 MPM
- Suitable for positions having seam related problems

ADVANTAGES

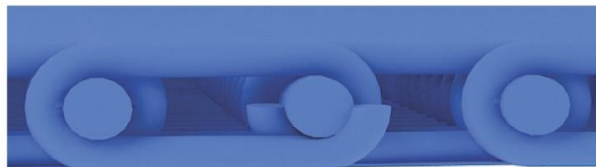
- Higher surface contact area. Very good resistance against abrasion and moist heat
- Extremely good ventilation and effective drying
- Easy for installation
- No thermal shrinkage /elongation. Maintains properties for longer time against heat and moisture
- Very high resistance to plugging and contamination
- Can be rejoined easily at customers end if damaged
- No risk of seam failure and seam marking

FEATURES

- Knuckle free plane surface
- High air permeability
- Spirally linked & No seam

TECHNICAL SPECIFICATIONS

- Air permeability : 500 - 600 CFM
- Basis weight : 1250 -1350 GSM
- Caliper : 2.20 mm



SIGMA TEC-F

SIGMATEC-F is with even and high contact surface on paper side and with appropriately maximum free space on roll side for efficient moisture removal.

This is a high performance dryer fabric with medium to high permeability for conventional dryer groups.

Double layer structure ensures excellent stability.

APPLICATION

- Advantageous for conventional dryer groups of paper machines making fine paper and coating base paper
- Suitable for conventional dryer groups of paper machines making fine paper with no pocket ventilation or limited ventilation
- Suitable for coated white duplex board against the liner side of the board

ADVANTAGES

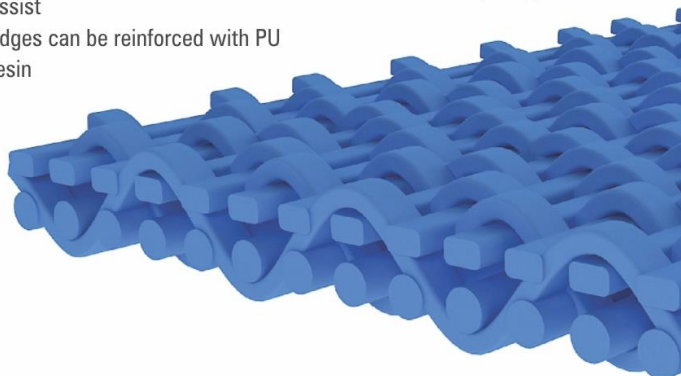
- Suitable for wide range of applications and optimising heat transfer
- High evaporation over dryer cylinder and very good stability
- Better contaminant and soil resistance and easier to clean
- No seam mark and high seam strength and easy to seam on machine
- Better resistance to edge raveling

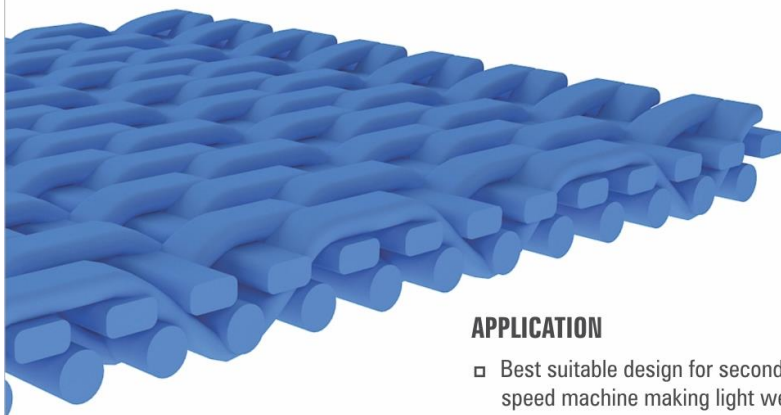
FEATURES

- Available in medium air permeability
- Good contact area
- Good open space on roll side
- Double layer structure
- All flat monofilament surface
- Mark free seam
- Can be provided with zip seam assist
- Edges can be reinforced with PU resin

TECHNICAL SPECIFICATIONS

- Airpermeability : 250-400 CFM
- Basis weight : 1200-1400 GSM
- Caliper : 1.75 mm
- Weave : 2 layer
- Seam : Pin-spiral (Inline)





SIGMARUN-S

SIGMARUN-S is a latest and unique dryer fabric with high contact surface on paper side combined with more open space on the roll side.

High contact area on paper side results in high level of heat transfer between sheet and cylinder and more open space on roll side to transport away the moisture quickly.

This dryer fabric is a balanced combination of best dryer fabric characteristics.

The aerodynamic surface ensures reduced air carrying and better sheet control at high speed.



APPLICATION

- Best suitable design for second and third uniron positions of high speed machine making light weight paper and newsprint.
- Suitable for uniron positions on medium speed machines making light weight paper and newsprint
- Suitable for single tier positions of light weight paper and newsprint

ADVANTAGES

- Facilitates sheet transfers and effective drying
- Improved sheet moisture profile and sheet quality
- Reduced draw and less sheet stress and better contaminant and soil resistance
- No seam mark and good seam strength. Easy to seam on machine
- Better resistance to edge raveling

FEATURES

- Minimal surface air carrying
- More open space on roll side for optimum air permeability
- Smooth surface
- Low caliper
- All flat mono yarn surface
- Mark free seam
- Can be provided with zip seam assist.
- Edges can be reinforced with PU resin

TECHNICAL SPECIFICATIONS

- Airpermeability : 100-130 CFM
- Basis weight : 1225 GSM
- Caliper : 1.70 mm
- Weave : 1.5 layer
- Seam : Pin-spiral (Inline seam)



SIGMARUN-XF

SIGMARUN-XF is a latest and innovative dryer fabric with all flat monofilament construction. It is an aero dynamic surface fabric with low permeability.

Special float weave construction for homogeneous even surface. Low caliper and high surface contact area ensures less sheet stress.

Its special weave combined with special flat wefts of high lateral flex resistance provides excellent CMD stability.

APPLICATION

- Latest dryer fabric for unrun positions of high speed machine making light weight paper and newsprint
- Ideal for unrun positions on medium speed machines not equipped with sheet stabilizer boxes
- Ideal for initial positions of machines with single tier producing light weight paper and newsprint

ADVANTAGES

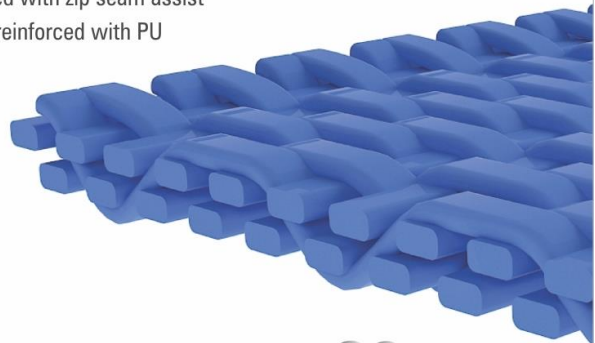
- Better sheet control particularly at transfers and no risk of sheet marking
- Maintains sheet moisture profile, sheet quality
- Better sheet stability
- Reduced draw and less sheet stress
- Better contaminant and soil resistance and no seam mark and high seam strength
- Easy to seam on machine and better resistance to edge raveling

FEATURES

- Minimal surface air carrying
- High contact area
- 100 % flat and smooth surface
- Low caliper
- All flat mono construction
- High density mark free seam.
- Can be provided with zip seam assist
- Edges can be reinforced with PU resin

TECHNICAL SPECIFICATIONS

- Airpermeability : 80 –100 CFM
- Basis weight : 1260 GSM
- Caliper : 1.50 mm
- Weave : 1.5 layer
- Seam : Pin-spiral (Inline seam)



DRYER FABRIC SEAMS

SELECTION OF THE SEAM.

Usually, the risk for fabric marking and seam marking are an important criteria, when selecting a dryer fabric design and seam type. Compatibility of the seam with driscreen design is vital. The key parameters which determine the ultimate seam quality are fabric design, spiral size, type of spiral mono (round or flat), diameter or size of mono, spiral inserting method (technique) and pintel wire selection. Typically, fabric or seam marking can cause on paper sheet in three different conditions as under,

- Mechanical marking
- Evaporation marking
- Marking due to uneven support and partially delayed shrinkage

Mechanical marking is seen as a plane difference in the paper surface and is a result of excessive pressure caused by fabric on the paper sheet. This can occur over the entire sheet or localized in the seam area. Typical machine and fabric parameters directly influencing mechanical marking are:

- Vacuum levels in rolls and runnability components
- Condition of roll and cylinder surfaces
- Fabric tension
- Fabric surface structure or condition of the fabric surface
- Furnish composition
- Sheet basis weight
- Sheet dryness

Evaporative marking is not seen as a plane difference in the paper surface, but can be seen visually by trans-illumination in light.. Evaporative marking is usually a result of uneven drying due to permeability differences between the fabric and the seam area. Positions with high applied vacuums and long fabric to sheet contact are particularly vulnerable to this type of marking.

Marking caused by local / partially delayed shrinkage of the paper forms larger plane differences or waves in the paper surface.

This partially delayed shrinkage is a result of uneven support, often in the seam area. Printing grades dried in total single tier dryer configurations are most sensitive for this type of marking. The latest driscreens with 100 % flat monofilament offers very smooth fabric surface that eliminates any risk for fabric marking.

.So, inline superfine spiral seam with optimum density and high surface uniformity is becoming of great importance for machine running at high speeds, more critically for unrun positions and single tier positions, making fine paper grades. Non uniformity in the seam area not only imparts seam marks but also causes premature wear.

Dinesh supplies driscreens with three types of seams, as under,

- (1) In-line pin-spiral seam (double density)
- (2) In-line pin-spiral seam (double catch)
- (3) In-line superfine pin-spiral seam (double density)

Superfine in-line pin-spiral seam is the latest development of driscreen seams. An in-line pin-spiral seam is made exactly like the pin seam except a small spiral is woven into the end of the fabric. This allows the use of twice as many MD yarns compared to the pin seam resulting in a much stronger seam. The new type of very fine in-line pin-spiral seam, combined with a specially engineered coil shape, which exactly matches the shape of the MD monofilaments in the fabric ensures a completely smooth and dense seam area.

Speciality paper machines producing sensitive decor paper have been choosing 100 % flat monofilament screens and in-line superfine pin-spiral seams to replace needled dryer fabrics, and thereby obtaining more consistent performance throughout the life of the fabric. Before these developments monofilament fabrics could not be used and only needled dryer fabrics were used to prevent sheet imperfections.



SEAM TYPES

Dryer fabrics are supplied open-ended and made endless by joining by seam on paper machine
Currently, types of seams used for woven dryer fabrics are,

SMALL LOOP SEAM (PIN SEAM)

No spiral is used to form the loops in this seam.
This seam is made by forming the seam loops of MD yarns and woven back in to the fabric with maintaining the same weave pattern making it in line (In built).

It maintains almost same caliper and smoothness of the fabric. The low extensibility and high tensile strength of the MD filaments ensure that the seam can withstand the same tensions as the fabric itself.

However, it has less damage resistance compared to inline spiral seam

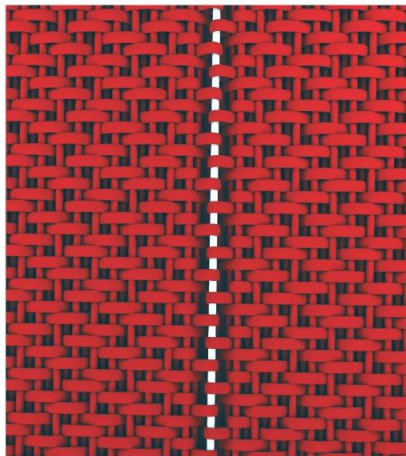
IN-LINE SPIRAL SEAM

This seam is made by inserting spiral mono into the fabric which is then woven back into the body of the fabric making this in-line. In line seam merits over fold back seam for non marking feature, low caliper and no stitches to gave away during run. In line seam is also better for durability (seam strength) than pin seam (or fine loop seam).

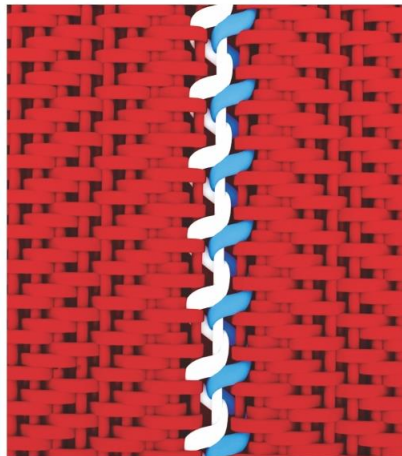
Different size of spirals from coarse to ultra fine in round and flat mono, can be used depending on the application requirements. For making in line spiral seam, various techniques are used to hold the spirals with the warp yarn of the fabric.

Seam descriptions used are as under,

- (1) Half density pin spiral seam
- (2) Double catch pin spiral seam
- (3) Double density pin spiral seam

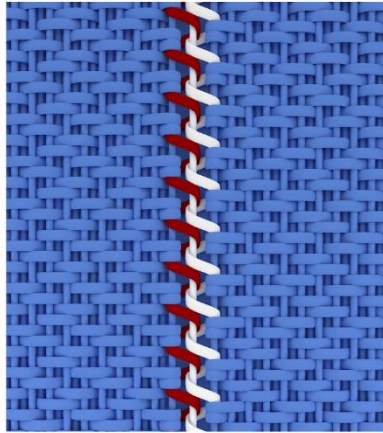


PIN SEAM

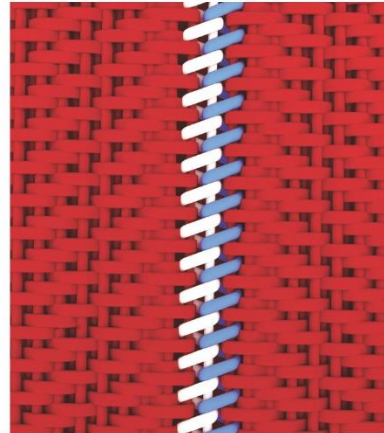


HALF DENSITY PIN SPIRAL SEAM





DOUBLE CATCH PIN SPIRAL SEAM



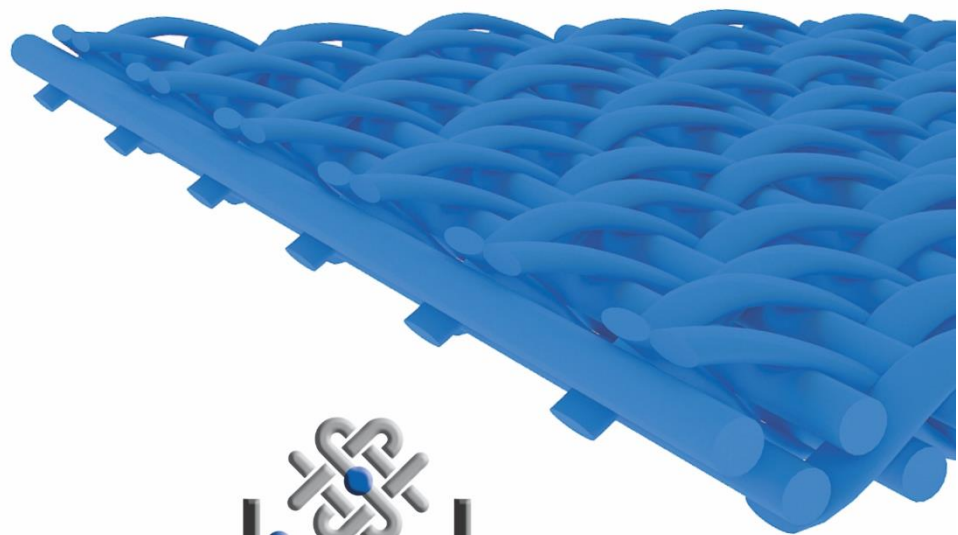
DOUBLE DENSITY PIN SPIRAL SEAM

IMPORTANT POINTS FOR SEAMING

- Seaming done with the help of temporary joining aids such as Velcro straps or a zipper assist
- Two ends of the seam are aligned before the seaming aid is joined
- Check-marks should be aligned during seaming
- To unwind the pintle wire carefully and do not unwind the excessive length to avoid entanglement
- Spiral loops of both ends should be matched perfectly and missing loops or double loops must be avoided
- Insert the pintle wire across the full width and draw the joining monofilament wire across slowly, so that twisting or entanglement can be avoided
- In case of difficulty in inserting the pintle wire through full width, insert it in to sections without missing any loops
- The length of pintle wire may be cut to approx 20 cms more than the screen width. 20 cms extra length is for tucking back at edges
- The ends of seam wire should be secured by re-inserting it behind the loops (tucking back) at each edge up to approx. 5cm
- The seaming aid must be removed by cutting and pulling out the stitched yarns
- Sealant provided with the screen should be applied to the screen edges up to the depth of the seam wire turn-back
- Keep extra length of seaming wires for future use such as re-seaming or in case of seam wire damage
- The guide palm must be returned to normal operation after seaming and before start up

DAMAGED SEAM

Seam is the weakest part of the dryer fabric and seam damage could occur at edges or at some places across the width. Repair work at seam edges requires expertise or specialist knowledge, as it is not possible to simply trim off the damaged area.



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