New Age Printing blankets

For efficient and high quality printing
Maniraju Bora - Trelleborg Printing Solutions
SW Asia Sales & Technical Director
Reasons for a New Age

- Cost pressures
- Process excellence and automation
- Sustainability
- Optimum rolling characteristics
New concepts

- Faster make ready
- Auto and integrated color measurements
- Integrated sheet inspection
- One Pass technology
- Overall – lean, mean, green & seen
- Efficiency to Excellence
New & Nxt.

- **Substrates**: Lenticular, MET/PET, microfluting and many more apart from paper and board.
- **New inks**: Low migration, high pigmentation, low energy, iriodin inks, metallic inks and more.
- **Coatings**: Dripoff, hybrid UV, Iriodin UV/conventional, scented.
- **Foiling / Precoat**: Cold foil, hot foil and metalure.
- **Technologies**: Intradeck, Anicolor, HUV, LED, EB, ceramic dampening and more.
Market dynamics

IMPACT ON THE BUSINESS

Less set up time
More colour, specialization, high quality
Overall product process is important
“Good products are no longer enough”
Total control and automation
Consistency of output across complete group
New Age printing blankets
Printing Solutions
History of printing blankets

- New generation of blankets are able to print FM, high density pigments, lower GSM, low migration inks and many more.

- Suited top layers for various print process and compressible layers to suit substrates and carcass for high stability.

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<td>Compressible blankets</td>
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<td>Compressible blankets 4ply</td>
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<td>Compressible blankets – 3ply hybrid top</td>
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<td>Compressible layers – positive &amp; neutral feed</td>
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Requirement of the New Age printing blankets

- Ability to handle lower GSM
- Ultra wide webs
- Tower technology
- High density pigments
- Handle both UV and conventional inks
- Rheology of ink and cleaning solvents
- Automation of cleaning process
- Fractional webs
- Daily use of FM, recycled newsprint, etc
Properties of the New Age printing blankets

- Better elastic properties
- High dimensional stability
- Suitable compressibility at indentation force levels
- Anisotropic levels
- Durable lifetime
- Compressibility and deflection
Properties of the New Age printing blankets

Multitude of complex variables:
- Viscosity
- Surface tension
- Wetting
- Curing
- Chemical affinity
- Abrasion
- Chemical resistance
- Dynamic properties
Changes in New Age printing blankets

ENGINEERING FABRICS
- Better tensile strength fabrics
- Lower elongation (both temporary elongation and elongation at break)
- Stable carcass
- Compressive ply (1st fabric). Design for feed, smash resistance and surface hardness
- Lower distorting effect
- Lesser sinking

Elasticity modulus
- Dimensional stability (2nd & 3rd ply)
- Low mounting stretch
- Quick wrap around
- Water solvent protection
Changes in New Age printing blankets

POLYMER TECHNOLOGY
- New compounding for printing both UV and conventional at high speeds
- Cleaning solvents stress
- Load stress due to mechanical and printing challenges
- Better dampening capacity
- Quick paper release
- Less piling
- Fractional web

Synthetic modulus
- Better dot reproduction
- Faster cleaning with less solvents
- Polarity of elastomers to reduce heat
- Functional throughout its life
Changes in New Age printing blankets

**ELASTOMER TECHNOLOGY**
- Microsphere technology
- Thicker compressible layer
- More cyclic times
- Lesser displacement when under load
- Even lay at the NIP

**Elastomer modulus**
- High and faster recovery of the blanket
- Less sinking
- Radial compression
- Control dot gain and squeeze
Effects of the changes

**Engineering fabrics**
- Low stretch carcass
- Water solvent protection to prevent solvent penetration and also heat
- Less sinking
- Better wrap
- Less distortion thereby sharp reproduction

**Polymer technology**
- Surface chemistry
- Energy saving
- Customized roughness
- Improved mechanical properties
- Improved chemical resistance properties

**Elastomer technology**
- Better mileage
- Wide thickness of substrates
- Faster reboundability
- Shock absorption

INCREASING DOT PRESSURE

INCREASING SQUEEZE

NPES PRINT BUSINESS OUTLOOK CONFERENCE 2017
Challenges in the New Age printing blankets

- Biggest challenge is the Blanket to Blanket on wide and ultra wide webs
- Higher speeds up to 1lac copies per hour (SWSC)
- Gauge variation on the couple
- Meeting point of the 4 blankets and blanket edges
- Lower indentation
- Auto cleaning, higher flash point washes and its effect
- Nip pressures effect
- Durability
- Wide range of substrates thickness
- Tight tolerances
- Combo printing and many more
New blanket manufacturing process

- Solventless printing blankets
- No sinking
- Better bonding between layers and top face
- Calendaring technology
- Homogeneous in thickness and rubber lay
- High production capacity
- High stable and consistent process
- Reduced production steps
- New capabilities for futuristic production capabilities
- Safer environment (reduce CO₂ emission)

...and many more advantages
Benefits of the New Age printing blankets

- Improved blanket lifetime and quality (abrasion, chemical, mechanical resistant)
- Reduce carbon footprint
- Renewable green consumables
- More user friendly blankets: lesser set up times
- Ultrawide and fractional web
- Printing with both conventional and UV
- Adaptable for future press technologies and consumables
- Can be set for new parameters in printing
Benefits

1. Material saving
2. Man-hour saving
3. Energy saving
4. Reduced emissions
5. Water saving

Improved productivity
Reduced costs
Eco-friendliness
Improved profits
New Age printing blankets

**INDIA FOCUS PRODUCTS**

- Manual and auto cleaning – chemical resistant top layers
- Mix of fractional web and full web – variable widths in newspapers
- Localized paper products – low grade papers
- More aliphatic than aromatic or vegetable washes – new generation chemicals for clean and care products
- Hybrid printing
- UV in daily newspaper printing
- Lower GSM paper
- High density pigments inks and specially formulated inks
- Customized blanket thickness, roughness and other properties to suit needs
Questions?