



# **NEW POSSIBILITIES FOR NONWOVENS IN MEDICAL TEXTILES**

**BY  
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[WWW.TECHNICALTEX.COM](http://WWW.TECHNICALTEX.COM)**

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# VALUE ADDITIONS

USA- NONWOVENS ROLL GOODS IN  
MEDICAL MARKETS- \$ 600 Million  
( Rs. 3000 Crores)

USA - NONWOVENS CONVERTED  
PRODUCTS IN MEDICAL MARKET- \$  
2.8 Billion  
( Rs. 14000 Crores)

# USA- APPLICATIONWISE VALUE

(Market Value)	\$ MILLION
■ Surgical Drapes / Drape Packs	1100
■ Wound care and surgical	400
■ Gowns	425
■ Staff Apparel	327
■ Surgical Masks	280
■ Surgical Footwear	241
■ Towels & Bedding	51
Total	2824



# WORLD MARKET FOR WOUNDCARE PRODUCTS

WORLD MARKET- \$ 15 BILLION

Rs. 75,000 Crores



# INDIA - ESTIMATES OF MEDICAL DISPOSABLE MARKET


	%
■ Surgical Drapes / Drape Packs	5
■ Wound care and surgical	70
■ Gowns	15
■ Staff Apparel	5
■ Surgical Masks	3
■ Surgical Footwear	2
■ Towels & Beddings	-

# OPPORTUNITIES FOR INDIA

- BIG LOCAL MARKET- > Rs.10,000 CRORES
- GOOD EXPORT MARKET IN USA AND EUROPE
- AVAILABILITY OF LOCAL RAW MATERIALS
- IMPORT MATERIALS AT INTERNATIONAL COMPETITIVE PRICES
- CHINESE PRODUCT COSTS INCREASING
- INTERNATIONAL CUSTOMERS LOOKING FOR ALTERNATIVE SUPPLIERS




# IMPORTANT ASPECTS FOR SUCCESS

- CLEAN FACTORY ENVIRONMENT
  - HYGENIC EMPLOYEE ATTITUDES
  - CONSISTENCY IN QUALITY
  - ATTENTION TO PACKAGING
- 

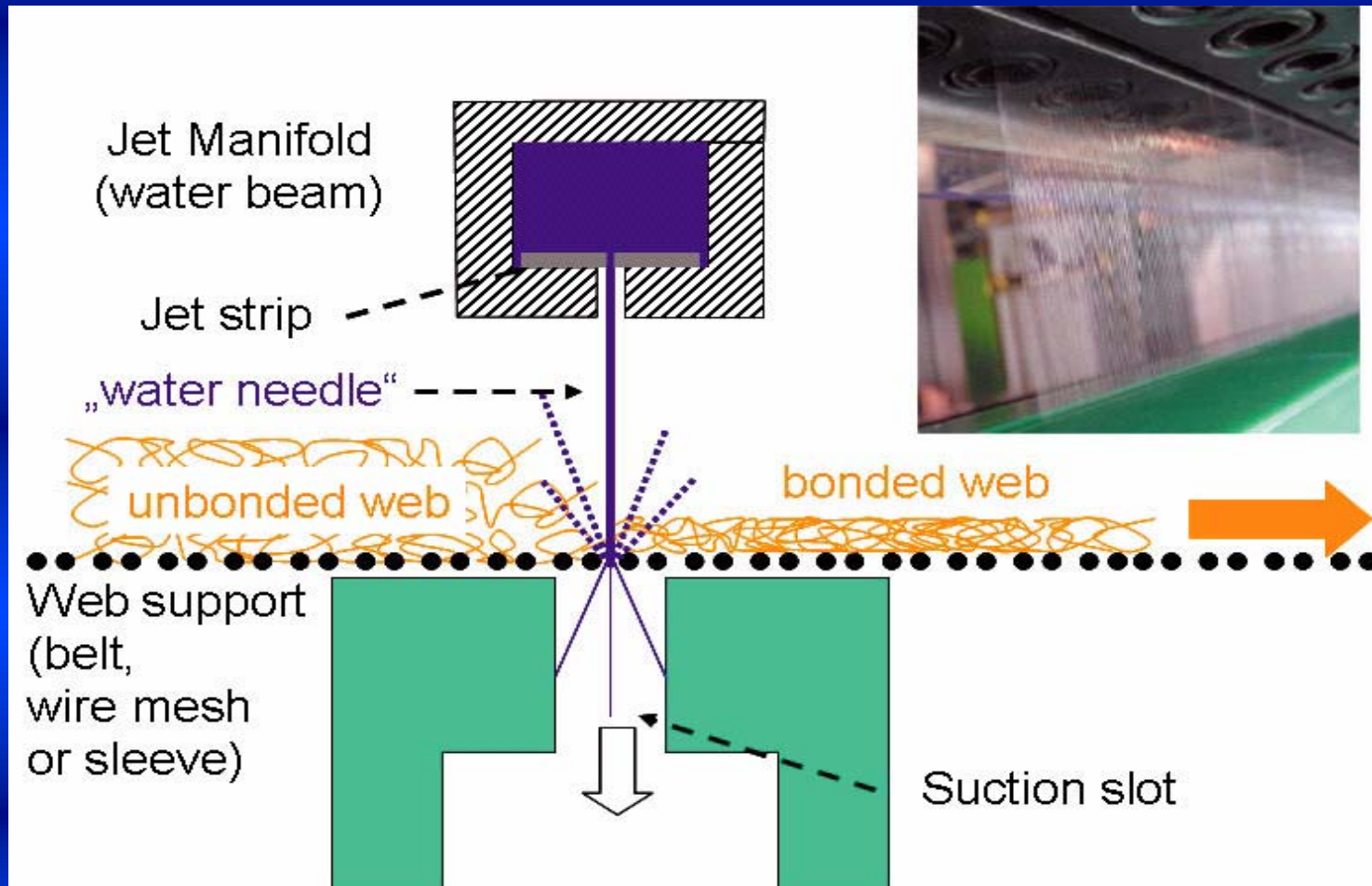


# NEW OPPORTUNITIES IN ROLL GOODS MANUFACTURE

- PRODUCTION OF SPUNLACE ROLL GOODS WITH MINIMUM INVESTMENT
  - PRODUCTION OF LAMINATED WOUNDCARE AND MATTRESS PAD PRODUCTS
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# SPUNLACING PRINCIPLE



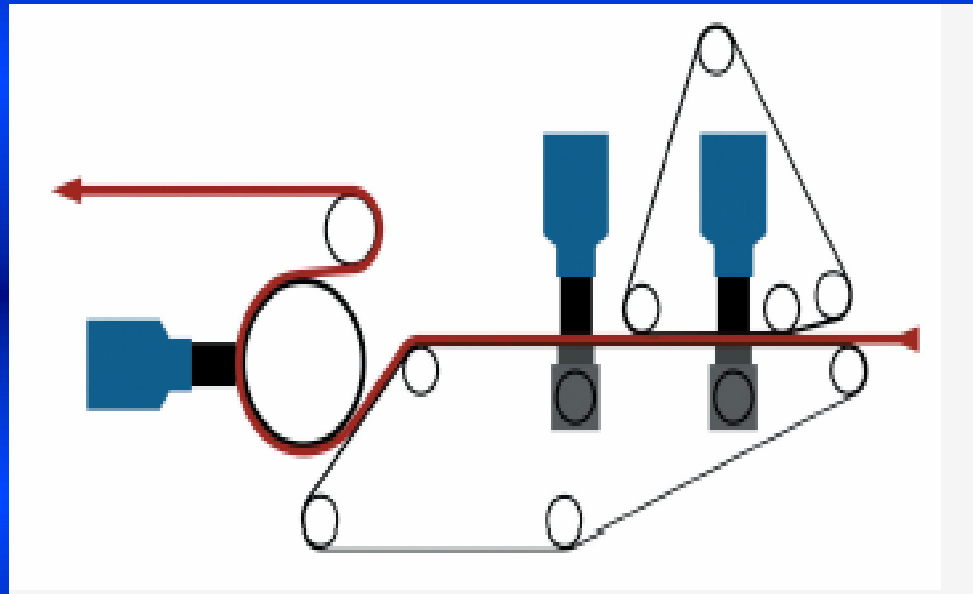
# TYPICAL WATERJET VIEW



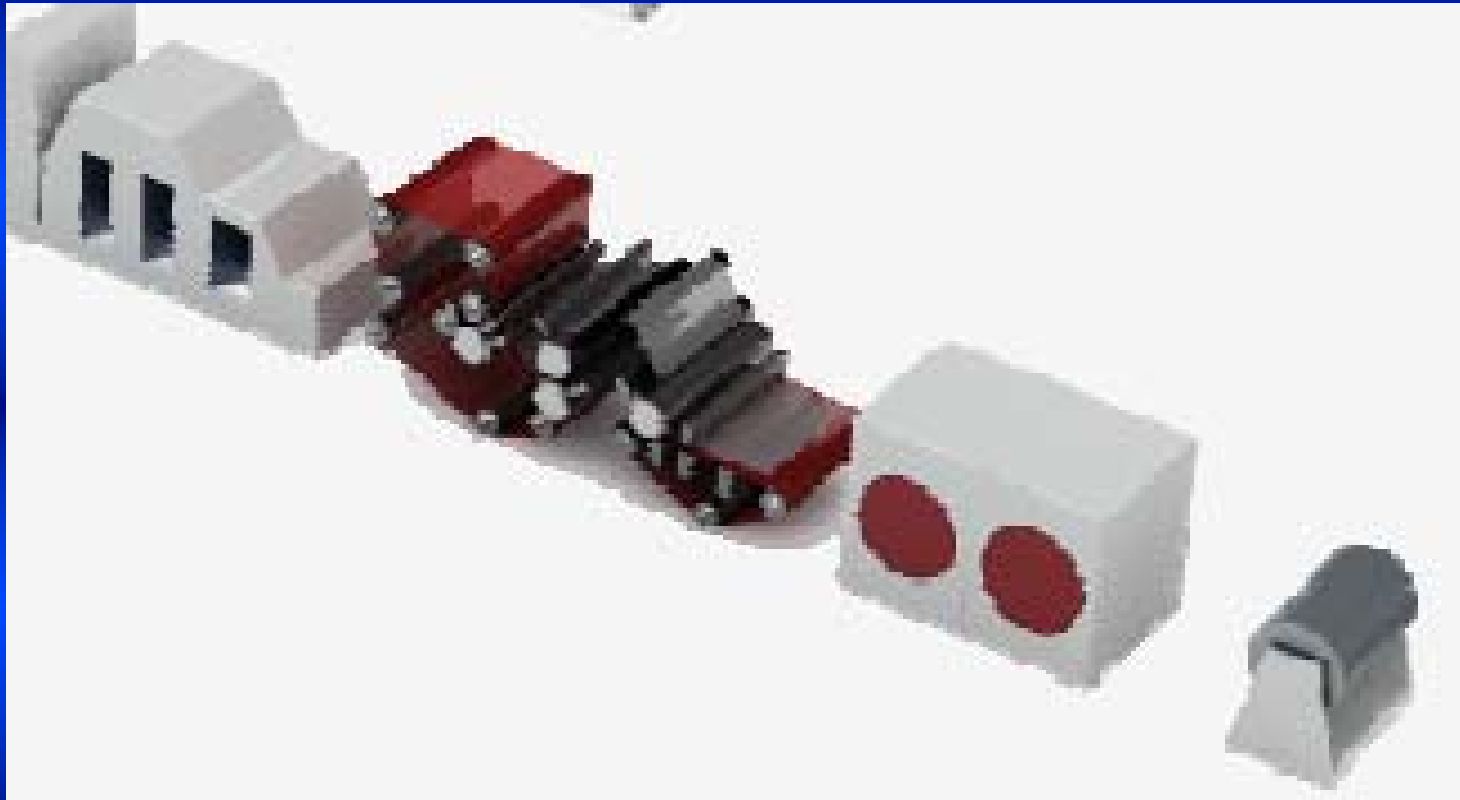
# SIMPLE LOW COST SPUNLACE LINE



# SIMPLE LOW COST SPUNLACE LINE



# PLANT LAY OUT





# PROCESS IN BRIEF


- OPENING
  - CARDING
  - HYDROENTANGLE
  - DRYING
- 
- PERFORATED AND PLAIN LOOK
- 

# TYPICAL MACHINERY- LOW COST

- COTTON BLOW ROOM-  
CONVENTIONAL
- COTTON CARD- CONVENTIONAL
- SPUNLACING UNIT- EUROPEAN OR  
CHINESE
- CAN DRYER- LOCAL



# TYPICAL PROCESS PARAMETERS

- COTTON CARD- 50 TO 90 KG/HR
  - SPUNLACING- 30 TO 55 MTRS/MIN
  - PRODUCT- 30 TO 60 GSM
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# TYPICAL OPERATING COSTS

- OPENING AND CARDING- Rs. 3 /KG
- SPUNLACING- Rs. 5 - 8 /KG  
(DIRECT COST)

# INVESTMENT- TYPICAL

- COMBINATION OF CHINESE AND INDIAN EQUIPMENT- Rs. 550 LAKHS
- COMBINATION OF INDIAN AND EUROPEAN EQUIPMENT- Rs. 800 LAKHS
- EUROPEAN EQUIPMENT- Rs. 1500 LAKHS

**PRODUCTS-**

**SWABS**



# PRODUCTS



**PRODUCTS-**

**WOUND DRESSING**



# PRODUCTS- BABY WIPES



# PRODUCTS - ALCOHOL SWABS






# ADVANTAGES OF SPUNLACE

- LOW LINT
  - SINGLE STEP PRODUCTION
  - HYGENIC PRODUCT
  - LOW MANUFACTURING COST
- 






# MARKET SITUATION WORLDWIDE

- GERMANY 30% SWITCHOVER TO SPUNLACE SWABS
  - FRANCE 50% SWITCH OVER TO SPUNLACE SWABS
  - ITALY 40% SWITCHOVER TO SPUNLACE SWABS
  - CHINA 30% SWITCHOVER TO SPUNLACE SWABS
- 



# MARKET NEEDS

- QUALITY BLEACHED COTTON MEETING US P OR BP STANDARDS
  - CONSISTENT QUALITY SUPPLIERS
  - LARGE VOLUME BLEACHED COTTON SUPPLIERS AND QUALITY SUBSTRATES FOR CONVERSION TO VARIOUS WOUND CARE PRODUCTS
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# **BRANDS USING SPUNLACE NONWOVENS**

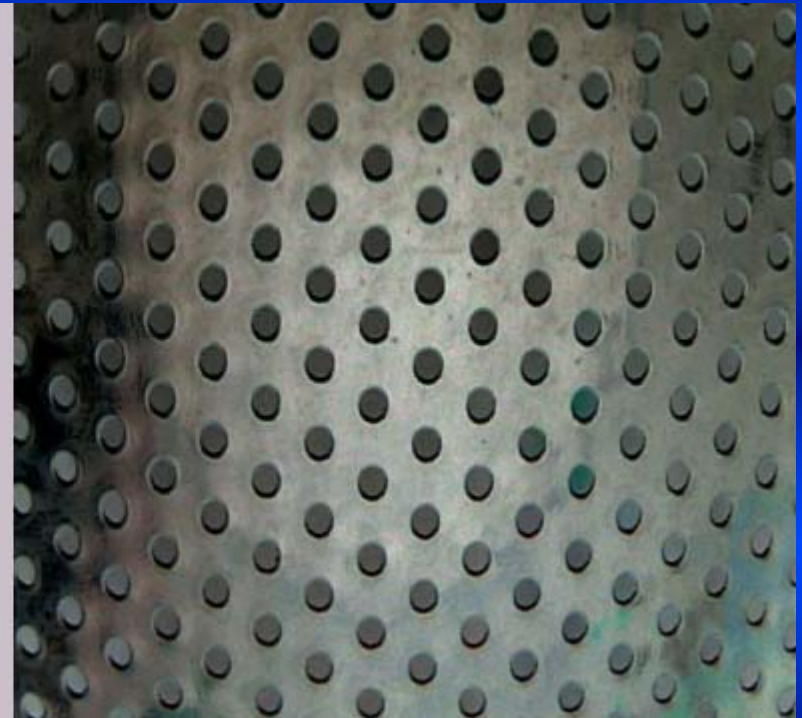
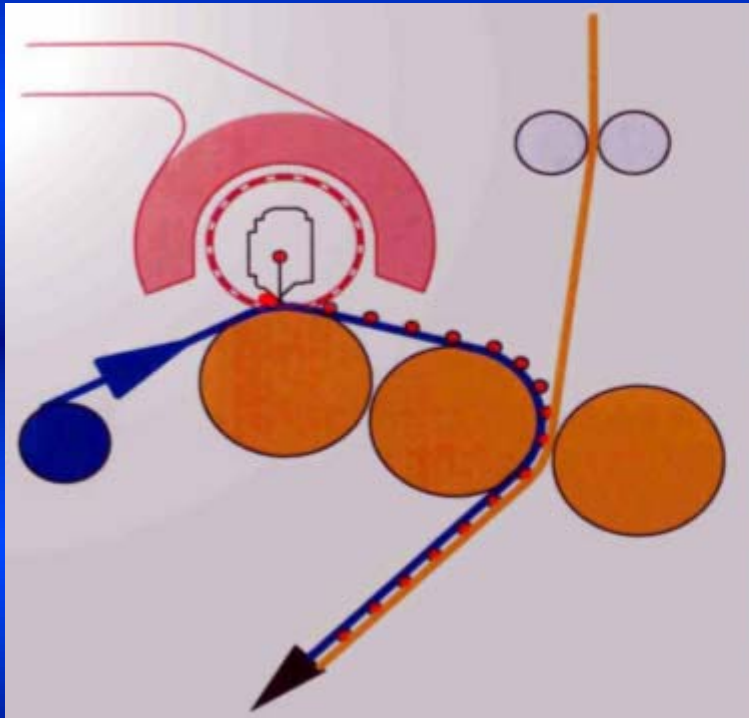
- **SMITH AND NEPHEW**
  - **JOHNSON & JOHNSON**
  - **KIMBERLY CLARK**
  - **PAUL HARTMANN**
  - **MÖLNYCKE**
  - **TYCO**
  - **BEIERSDORF**
  - **CARRINGTON**
  - **3M**
- 



# LAMINATED SPUNLACE PRODUCTS

- FILM LAMINATED WOUND CARE PRODUCTS
- FILM LAMINATED MATTRESS PADS
- LAMINATED LOW COST BABY DIAPERS

# TYPICAL HOT MELT LAMINATION




# TYPICAL SMALL WIDTH LAMINATOR





# LAMINATOR BASICS

- INFEED
  - RETRACTABLE APPLICATOR AND BREAST ROLL
  - HOT MELT PRE MELTING SYSTEM APPLICATOR
  - LAMINATING ROLL
- 


# TYPICAL HOT MELT GLUES

- EVA- ETHYL VINYL ACETATE-  
UPTO 100 Deg C- SENSITIVE TO  
WATER AND STEAM BUT VERY  
ECONOMICAL
- POLY URETHANE (PUR)-  
UPTO 150 DEG C, MOISTURE CROSS  
LINKED  
SLIGHTLY EXPENSIVE
- COPOLYMERS OF POLYAMIDES  
UPTO 150 DEG C, WASHABLE,  
EXPENSIVE





# LAMINATING PROCESS DETAILS

- 10 TO 20 MTRS/MIN
  - ENERGY- 10 TO 20 KW
  - FILM TO NONWOVENS
  - RELEASE PAPER TO NONWOVENS
  - PERFORATED FILMS TO NONWOVENS
  - GLUE AND RELEASE PAPER TO  
NONWOVENS FOR ADHESIVE  
BANDAGES
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# TYPICAL INVESTMENT

- EUROPEAN EQUIPMENT- Rs. 400 LAKHS
- CHINESE EQUIPMENT- Rs. 150 LAKHS
- FABRICATED in INDIA WITH IMPORTED GLUE APPLICATOR- Rs. 100 LAKHS

# DETAILS OF IV BANDAGE- LAMINATED TYPE

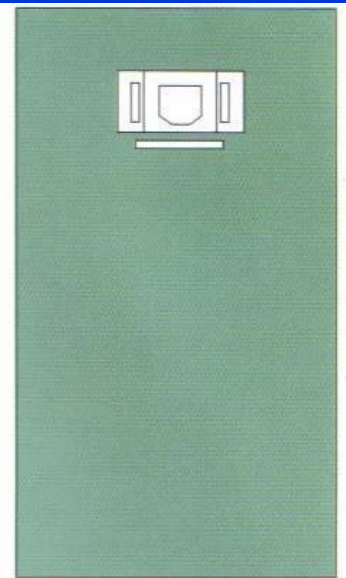
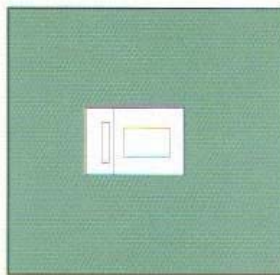


Adhesive Wound Dressing- It highly imbibe the section of wound absorb and retain fluid, prevent wound from seeping and external infection. Highly absorbent non-adherent wound pad. Laminated

# OPHTHALMIC DRAPE

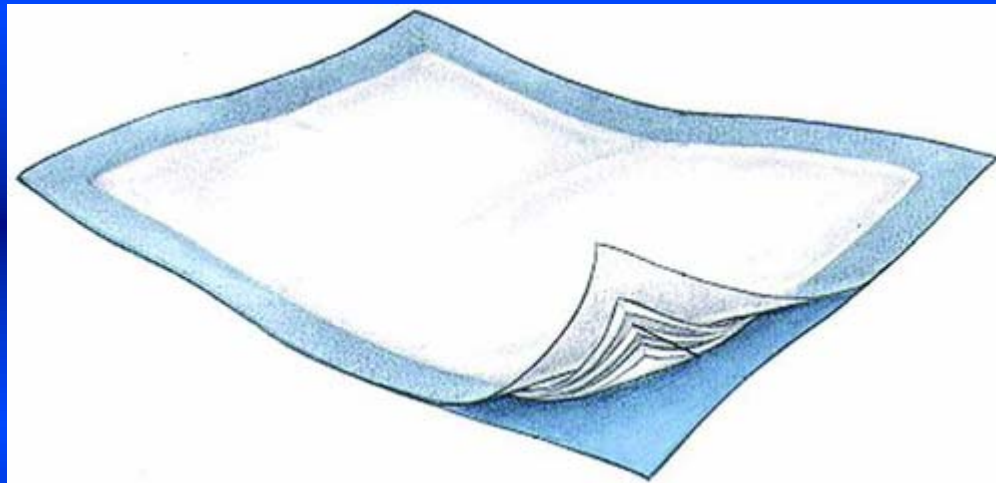
With fluid collection pouches  
with incise film

Ideal for variety of Surgical Procedure  
Variety of styles and sizes are available



[www.biztrademarket.com](http://www.biztrademarket.com)


# DISPOSABLE HOSPITAL UNDER PADS



Soft, non-woven facing  
Highly absorbent cellulose fiber  
Polyethylene nonskid backing resists  
shifting




# OTHER TYPES OF LAMINATED DRAPEs

- GYNEC DRAPEs
  - CARDIAC SURGERY DRAPEs
  - ORTHOPEDIC DRAPEs
  - OTHER TYPES FOR DIFFERENT  
SURGICAL PROCEDURES
- 



# OTHER TYPES OF COTTON BASED NONWOVENS

- NEEDLEPUNCHED COTTON PADS  
AS OIL SORBENTS
  - DE MAKEUP PADS
  - BABY WIPES
  - COTTON/FLAX/HEMP BASED  
AUTOMOTIVE COMPOSITES
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# CONCLUSIONS

- SCOPE FOR ENTREPRENEURS TO INVEST IN LOW COST SPUNLACING EQUIPMENT TO IMPROVE PRODUCT QUALITY
- MAKE VALUE ADDED PRODUCTS BY INVESTING IN HOT MELT LAMINATING EQUIPMENT
- HUGE EXPORT POTENTIAL IF YOU CAN MAKE NEW TYPES OF PRODUCTS AND MAINTAIN HYGIENE CONDITIONS