

HWASEUNG EXWILL

Belt Business Team



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A. Belt business factory

2) Subsidiary company : HSMJ



[HSMJ Rubber Co., Ltd]

- Establish : 2005. Apr.
- Location : **Qingdao, China**
- Annual turn over : 25 Mil. USD
- Capa. : 800,000 M / Year
- Item : C/Belt (Fabric, ST-Cord)

※Korean factory was established in 1990 and transferred to China in 2006.

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Belt Manufacturing

2) Topping



3) Forming



4) Covering



5) Curing(vulcanizing)



6) inspection & Packing



7) Shipment



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Ability of belt factories

<Current capacity>

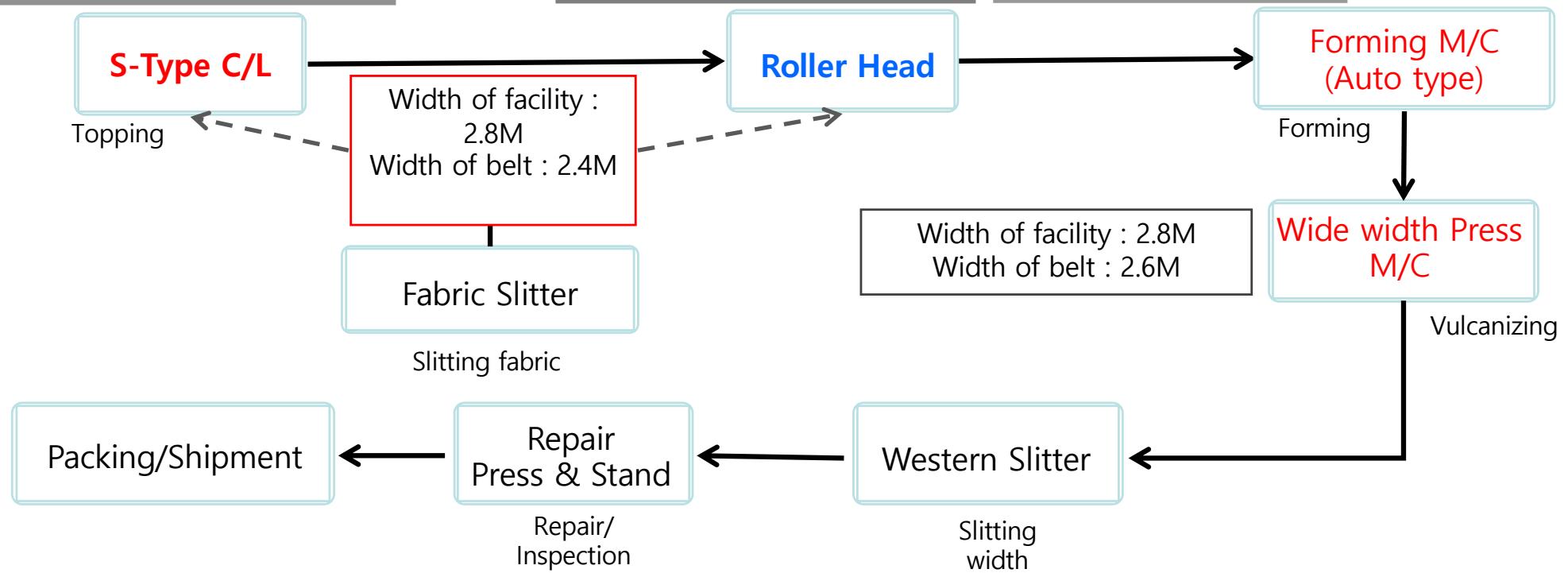
Contents	HSMJ (China factory)	HSLS (Malaysia factory)
Capacity	800,000 M / Year (Max. 900,000 M / Year)	650,000 M / Year (Max. 800,000 M / Year)
Available products	Fabric c/belt (General, special) Steel cord c/belt (General, special)	Fabric c/belt (General)
Curing machine (For fabric c/belt)	36" Press machine (Max. width 810mm)	48" Press machine (Max. width 1,100mm)
	60" Press machine (Max. width 1,400mm)	90" Press machine (Max. width 2,200mm)
	Rotocure #1,2 (Max. width 1,600mm)	-
Curing machine (For ST-cord c/belt)	ST-press machine (Max. width 2,200mm)	-

Expansion in China factory

C. Facilities Expansion list

Facilities	Process		Remarks
	Name	Details	
S-Type C/L	TOPPING	Rubber coating on the fabric	
Slitter	Slitting	Slitting coated fabric	
RHP	Sheeting	Cover ,topping, compound sheet	
Automatic Forming	Forming	Forming cover ,plies	
Press Machine	Vulcanizing	Vulcanizing	2.8M X 12.6 M X 2EA
Repair Press	Repair vulcanized belt	Repair vulcanized belt, Defect on surface, etc	
Repair Check-out stand & W/S	Winding, cutting of width, Inspection	Winding, cutting of width, Inspection	Dual Core ,Increase in winding diameter
Mixing facility	Productions of CMB	Produce	270 Liter Intermix
Facilities of test and evaluation	Test, Evaluation	Evaluation of half-finished & finished products	Investment for additional test machine

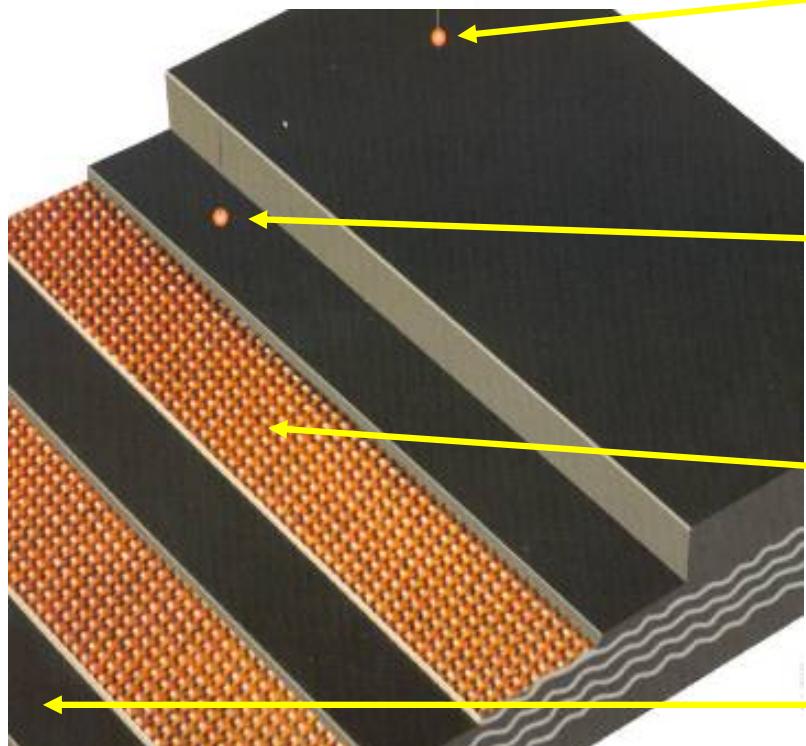
Flow of production



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Belt business products

3) Belt Construction



Top Cover

Designed to protect the carcass from service conditions like oil, heat, abrasion etc.

Skim Coat

Compounded for excellent adhesion between plies for protecting against ply separation.

Belting fabric (Carcass)

Extremely low stretch characteristics of fabric and good trough ability.

Bottom Cover

Excellent in abrasion and flexibility, provides wearing surface against pulleys and idlers.

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Belt business products

4) General Purpose Conveyor Belt



Grades

RMA - 1,2	DIN - X, Y, Z
BS - N17, M24	AS - N, M
JIS - G, S, A	Grade N

The high quality of cover rubber to provide outstanding resistance to sharp and abrasive materials and recommended for transporting abrasive coal, crushed ores, rock and granite etc.

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Belt business products

5) Heavy Abrasion Conveyor Belt



Grades

DIN – W

AS – A

SAR

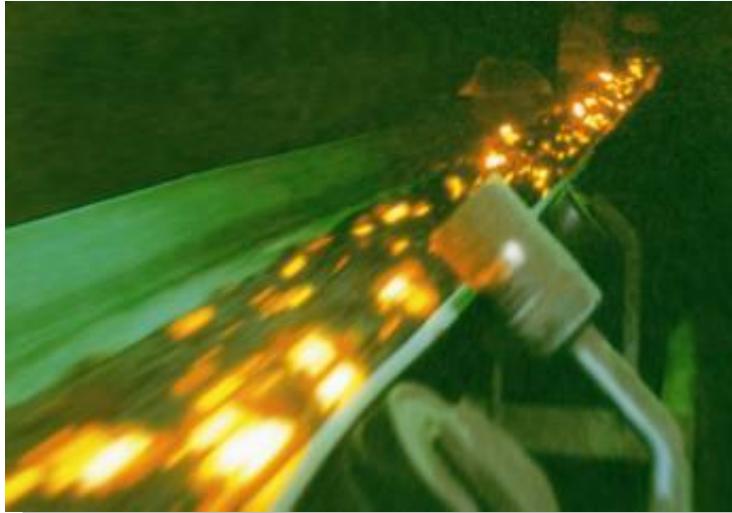
Grade M

This conveyor belt is designed for the ultimate resistance to abrasion, and recommended for transporting abrasive materials. This conveyor belt is developed to assure you longest belt lifetime and suitable for conveying glass, cullet, granite, trap rock and other abrasive materials.

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Belt business products

6) Heat Resistant Conveyor Belt



Grades

**HT - 400(HR - 100) / SBR / Low
ECO-BELT / EPM+SBR / High
HT - 710(HR - 150) / EPM / High
SUPER-HT(HR - 200) / EPM / Super**

The performance proved this belt meets hot service application like hot sintered ore, hot pellet, hot clinker, chemical, fertilizer and cement etc. These belts are most suitable for heat resistant applications where the temperature of material to be carried is over 70°C(140°F)

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Belt business products

7) Flame Resistant Conveyor Belt



Grades

FR-100 (MSHA/MOR)

FR-120 (MSHA/SBR)

FR-140 (ISO, DIN, JIS, KS)

This conveyor belt is designed for the best service conditions of coal mining industries. It is suitable for coal mining, power plant, electric utilities, coal terminal plants. The different rubber compounds are available in accordance with its requirement.

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Belt business products

7) Flame Resistant Certificate of MSHA, US

U.S. Department of Labor

Mine Safety and Health Administration
Industrial Park Road
RR 1, Box 251
Triadelphia, West Virginia 26059



February 17, 1999

Mr. C. B. Kim
HS R&D Co., LTD.
147-1 Kyo-Dong Yangsan
Kyoungham, Korea

Dear Mr. Kim:

Your request dated September 15, 1998, for acceptance of HS-FMAX conveyor belting (Application No. 980915) for use in underground mines was evaluated by the Materials and Explosive Testing Branch, Engineering and Testing Division, Approval and Certification Center.

The above designated product and the information provided meet the flame resistance requirements of Part 10, Title 30 Code of Federal Regulations (CFR), and the Interim Fire Criteria for Acceptance of Products Taken into Underground Mines. Acceptance is granted to the product having the following characteristics:

Trade Name:	HS-FMAX
Cover Compound:	B 5011-1
Cover Thickness:	Top: 3.0 mm (minimum) Bottom: 1.5 mm (minimum)
Number of Plies:	2 through 5
Skincoat Compound:	B 5604-1
Skincoat Thickness:	0.035" (0.89 mm)
Friction Compound:	None
Fabric Weight:	36.0 oz./sq. yd.
Fabric treatment:	RFL
Type & Weight of Ply Material:	Warp - Polyester, Weft - Nylon
Binder:	Nylon
Breaker:	None

This product is assigned U.S. Mine Safety and Health Administration (USMSHA) No. 2B-85/4.

This product shall be labeled in accordance with Part 10, Section 10.65(f)(1), Title 30 CFR, as "Fire Resistant, USMSHA No. 2B-85/4" by symbols at least ½-inch high depressed into the product approximately 1-inch from the edge of the carrying (top)

DON'T BE CAUGHT OFF GUARD

BY THE MILLENNIUM CHANGE!

U.S. Department of Labor

Mine Safety and Health Administration
Approval and Certification Center
765 Technology Drive
Triadelphia, West Virginia 26059



In Reply Refer To:
MSHA:ACC:PAR 98617
Approval Record File
No. 14-CBA110001

The review of your application dated August 30, 2010, Company Code No. 100830, for Vulcanus/2885-6 conveyor belt is complete.

This conveyor belt construction meets the requirements of Part 14 of Title 30 Code of Federal Regulations (30CFR Part 14).

The following requirements apply to this approval:

1. This belt must be marked "14-CBA110001-MSHA" in characters at least 1/2 inch high, repeated at least once every foot across the width of the belt, at intervals not exceeding 60 feet for the entire length of the belt. The markings must be legible and permanent. Other marking methods may be used with prior approval of MSHA.
2. A prepaid sample of the product with the approval markings, having the construction specified above, is to be sent to the Chief, Quality Assurance and Materials Testing Division at the letterhead address for examination in a timely manner. The sample submitted must have a free border of at least 1 inch on all sides.
3. Approval of this product by MSHA obligates you, as the manufacturer, to meet the quality assurance requirements of 30CFR§14.8.
4. Any change in product composition or in any other factors that may affect an approval issued under Part 14 must not be made without prior authorization.
5. We have the right to revoke this approval for cause at any time.
6. **This approval applies only to the products listed on the attached specification sheet. An approved conveyor belt must be marketed only under the name specified.**
7. We must be notified of any transfer of production or ownership of this product.

An invoice for the cost of processing this action will be forthcoming.

If you have any comments or questions relative to this letter, please refer them to Bill Kelly at 304-547-2022.

Sincerely,

John P. Faini
Chief, Approval and Certification Center

Enclosure: Specification Sheet



MSHA (USA)

(Issuing date : 17, Feb, 1999)

NEW MSHA (USA)

(Issuing date : 2, Feb, 2011)

Russia

(Issuing date : 2, Feb, 2011)

HWASEUNG EXWILL

Belt business products

8) Oil / Heat Oil Resistant Conveyor Belt



Grades

OR – 300

OR – 200

OR – 100

HTN / HOT ASPHALT

The cover rubber is especially compounded for the applications requiring resistance to oils. It has outstanding abrasion, ozone and weather resistance. This conveyor belt is recommended for the conveyor lines causing swelling and sponginess by oils.

HWASEUNG EXWILL
THE MAIN SUPPLIER FOR PULP INDUSTRY
THE BEST OF QUALITY AND AFTER SALES
SERVICE



□ HWASEUNG EXWILL

Sales volume by products / 2012 year

	Contents	Customers	Grades	Q'ty (M)
Fabric C/Belt	Domestic	POSCO, Hyundai-steel Domestic Power Plant Dong-Bu HITEK Nam-Hae Chemical Corp.	General, KS-S Heat Resistant, Oil Resistant, Frame Resistant, PIPE BELT, etc.	2,150,000
	Overseas	North and South America Japan, South Africa Asia, Hong Kong, Middle East, etc.	RMA,JIS,AS, DIN, SABS, Heat Resistant, Oil Resistant, Frame Resistant, Hot Asphalt, etc.	10,605,000
ST-Cord C/belt		POSCO, Hyundai-steel Domestic Power Plant, South America, Asia Middle East, etc.	General, Heat Resistant, Abrasion Resistant, Etc.	45,000
G. Total				12,800,000

HWASEUNG EXWILL

Strength point of HS Conveyor belt

1) Long experience and technology in rubber industries

→ We, Hwaseung Group, have long experience more than 35 years in rubber products, all subsidiary companies are related in rubber industry.
For conveyor belt business, we've been doing a business more than 20 years.

2) Management in a stage of preparation of raw materials

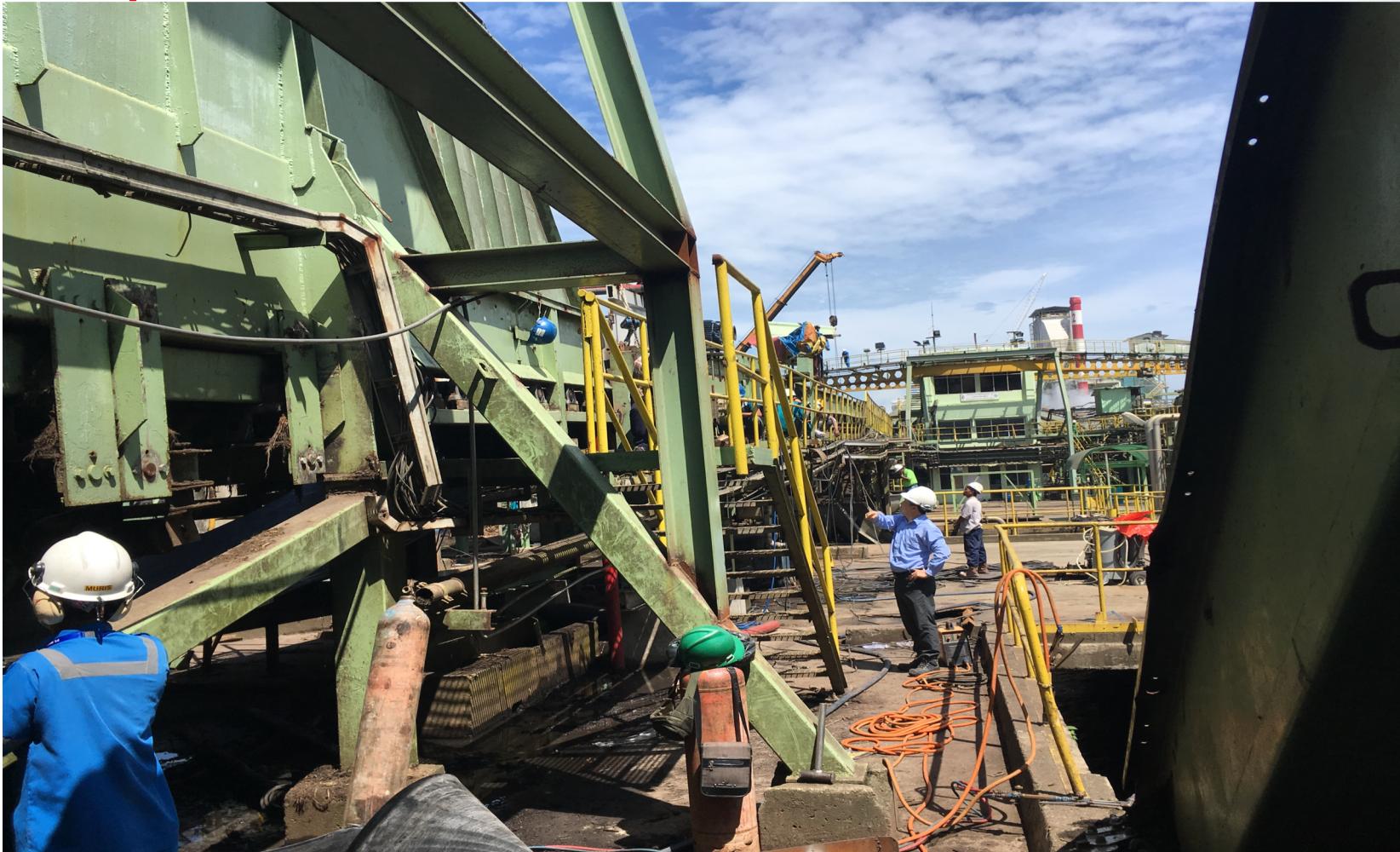
→ One of our subsidiary company, Hwaseung Material is manufacturing rubber compound in Korea. Hwaseung Material is 2nd biggest company which is manufacturing rubber compound, like CMB, TPE, etc.
We can handle the quality of products in a preparation stage of raw materials.

3) High quality in conveyor belt

→ Our main market is USA which is required for high quality, more than 45% of our total sales volume. Moreover, we're one of yearly sales contract with governmental companies, like POSCO, Hyun-dai steel work, most power plants.

□ HWASEUNG EXWILL

**THE BIGGEST SUPPLIER FOR PULP MILL IN
INDONESIA (RIAU ANDALAN PULP ~ 20 KM
LENGTH)**



□ HWASEUNG EXWILL CO.,LTD

Thank You.

We're Selling Trust !!