

paperboard, containerboard, fluting/corrugating, linerboard, kraft bag, liquid packaging board, food and beverage containers, bleach board, white top paperboard, boxboard, and other related subgrades.

European fashion retailers welcome new rule of labeling

Adoption by the European Parliament of a Regulation on textile names and related labelling of textile products was welcomed by the European Association of Fashion Retailers, AEDT.

This long-called-for and much needed Regulation simplifies the existing regulatory framework for the development of innovative fibres and, in reducing the time that elapses before a new fibre can enter the market, should increase their uptake. "By cutting red tape and facilitating the placing on the market of novel fibres, this Regulation should foster innovation in the textile and clothing sector which is good news for European fashion and footwear retailers" said AEDT's President, Betty van Arenthals.

The vote in Parliament was the culmination of a long negotiation process during which a number of substantive amendments to what was essentially a technical proposal from the Commission were adopted, thereby extending the scope of the final Regulation. Despite this, AEDT is happy that the essence of the Commission's original proposal was maintained, the aim of which was to help the European apparel and textile industry remain competitive at the international level.

The Association is also glad that the eventual introduction of additional labelling requirements at the EU level will be preceded by the drafting of a report looking into the feasibility and added value of possible future labelling schemes.

Kolon to construct Vietnamese tire cord fabrics plant

South Korean company Kolon Industries is constructing a tire cord fabrics plant in Binh Duong Province, Vietnam at a cost of \$600 million, which is expected to be commissioned in 2018. Kolon Industries picked Binh Duong, as the province has set a goal to attract investments in production of chemical fibres and industrial fabrics used in tires.

According to South Korean media reports, Kolon will spend \$220 for the first phase of the project in 2017, while the rest,

will be invested between 2018 and 2026, for a capacity of 6,000 tons per month.

This is the second investment of Kolon Industries in the province, having already invested in a plant to produce airbags for automobiles.

EU looks set to approve textile trade pact with Uzbekistan

The European Parliament looks set to approve textile agreement with Uzbekistan on Wednesday that would lead to increased textiles imports from the country despite ongoing concern over the use of forced labour in the cotton harvest. The pact will resolve the final missing element and also further lower tariffs on Uzbek textile imports.

The EU had a free trade agreement with Uzbekistan for everything since 1999 except textiles, as it was a sensitive issue in Europe. But since then, textiles have become less and less sensitive because they have less of a textile industry. And so it is no longer sensible to exclude textiles.

Even with absence of an agreement, Uzbek textiles flow easily into Europe because of low tariffs, with the category second only to chemical products in EU imports from Uzbekistan, at 38 million euros (\$40.35 million) last year. The EU is nearly tied with Kazakhstan as Uzbekistan's third-largest trade partner, behind China and Russia. Bilateral trade last year totaled almost 2 billion euros.

Human Rights Watch, a U.S.-based campaign group, however accuses the Uzbek government of forcing more than 1 million adults to pick cotton at harvest time. Cotton accounts for around 17% of the country's exports and according to trade group Cotton Inc., the country is world's fifth-largest exporter of the fiber.

Human Rights Watch and other groups successfully lobbied opposition in the European Parliament to the Uzbek textile agreement ahead of a planned vote in 2011 over the use of child labor in the cotton harvest, with parliamentarians then voting 603-8 against moving forward.

Uzbekistan subsequently moved to address the complaints and allowed the International Labor Organization in to observe the harvest for the first time in 2013. By 2015, the ILO had concluded that child labor had become "rare, sporadic and socially unacceptable."

The EU-Uzbekistan Partnership and Cooperation Agreement that has been in place for 17 years, making each side a most favored nation for the other.

Inditex Group 9M sales expand 11%

In the nine months ended October 31, 2016, net revenue at the world's biggest apparel marketer Inditex Group, expanded 11 per cent over the same period of the previous fiscal. Driven primarily by solid same store sales growth, net sales in constant currency terms, however, surged 15 per cent year over year at the Spain based garment marketer.

Net profit in the first nine months of fiscal 2017 rose slower at 9 per cent over a fiscal ago period at €2.2 billion.

According to Inditex, which has brands like fast fashion brand Zara and Pull&Bear, in its portfolio, this growth, coupled with the group's investments, has created 9,245 new jobs across the world in the last 12 months, of which 1,705 were created in Spain.

"The company's growth is driving noteworthy job and value creation in our various markets, most particularly in Spain, boosted by the simultaneous growth at our headquarters," Inditex chairman Pablo Isla said. "This momentum is the result of sustained investment in logistic facilities and stores, as well as the ongoing development of integrated offline-online store model."

Inditex has 7,240 stores in 93 markets and an online presence in 41 markets, having recently launched its online sales platform in Turkey.

Klüber launches lubricants & services for textile industry

Maker of speciality lubricants, Klüber Lubrication offers a wide range of speciality lubricants and services for the textile industry. In addition, KlüberEfficiencySupport helps protect valuable resources such as energy and water, thus helping to reduce operating costs, through its experts, who work on the systematic optimisation of lubrication processes.

According to Klüber, the services and consulting services combined under KlüberEfficiencySupport are precisely tailored to the requirements and challenges of the respective customers, far exceeding the actual lubrication issue.

This includes services such as the development of lubrication schedules, cleaning and re-lubrication, general inspections as well as lubricant and component analyses, all of which are aimed at the optimal utilisation of the machines.

The company also offers tailored training to the textile industry, where participants learn about the optimisation of lubrication processes, inspections and maintenance, correct

lubricant application and the prevention of typical errors such as excessive lubrication or lubricant starvation.

ACIMIT firms to partake in Colombiatex 2017

The Association of Italian Textile Machinery Manufacturers (ACIMIT) has announced that around twenty Italian machinery member firms are set to partake at the upcoming edition of Colombiatex, textile machinery exhibition, to be held in Medellin, Colombia from January 24 to 26, 2017, in the common area set up by the Italian Trade Agency and ACIMIT. Among the Italian manufacturers in attendance at the common exhibition space, ACIMIT's associated members include Biancalani, Btsr, Cogne, Carù, Fadis, Fk Group, Iteima, Laip, Mactec, Mcs, Monti-Mac, Nexia, Nosedà, Ratti, Reggiani, Srs, Tecnorama, Testa, and Ugolini.

The well represented contingent of Italian manufacturers at Colombiatex confirms the level of attention Italy's textile machinery manufacturers place on the Colombian market.

ACIMIT president Raffaella Carabelli said, "Colombia is a country whose textile and garments industry has grown significantly in recent years. The fashion sector has made its mark throughout the continent, thanks to its dynamic outlook and originality. For the second year at Colombiatex, Italy's textile machinery industry will be collectively represented, bearing witness to the undisputed value both the event and the Colombian market have taken on over time for our machinery manufacturers."

Xerium debuts new generation of forming fabrics

Xerium Technologies has launched Transform, a new generation of forming fabrics designed especially for paperboard and packaging machines. Transform forming fabrics have been tailor made for every type of board and packaging former: fourdriniers, twin wire formers, top formers, gap formers, and multiply formers, while also offering several benefits.

According to Xerium, Transform forming fabrics offer various benefits, including lower energy consumption and extended fabric life.

The company conducted trials of these new fabrics in select board and packaging mills, which threw up excellent results of improved drainage rates and sheet quality.

Transform technology is applicable for machines producing,



World Textile News

Wrangler aims to lower water wastage by 20% by 2020

Wrangler, the global leader in jeanswear and casual apparel, has taken steps to reduce water wastage by 20 per cent by the year 2020. Beginning 2007, Wrangler has saved three billion litres of water at its production facilities. The company plans to invest in additional technology with the aim to achieve 75 per cent water-recycling rate by 2018. "Wrangler has always had a strong connection to the land and a commitment to protecting our natural resources for future generations... Now, we are expanding our water stewardship programme goals to further help reduce our impact and conserve the water resources of the communities where we operate," said Tom Waldron, president of Wrangler. Water plays a significant role in the manufacturing of denim. The finishing steps in producing a pair of jeans typically require multiple water baths. By merging steps, Wrangler reduced water usage without compromising quality. This improved wash down process. Wrangler's water recycling programme of investing in advanced wastewater treatment systems improves effluent water quality. This allows treated water to cycle back through the system. The company's owned Torreon facility in northern Mexico has achieved 45 per cent water-recycling rate through a combination of disc filtration and biological treatment processes.

McMaple launches new rayon fabric for garments

McMaple Textile Company, a leading rayon and viscose

fabrics company, has launched a new rayon fabric that is perfect for garments. Available in black and red colours, the new product is plain woven with density 68*68, yarn count 30*30, width 63", and weight 127g. The company has also launched a new printed dress material woven rayon fabric.

The new printed dress material has classic chic pattern that make the colour of hair and skin look more elegant and stylish. Designers' favourite from New York to Paris, this fabric has yarn count 45*45, density 100*80, width 142 cm and weight 110-115g.

McMaple rayon and viscose fabrics are highly absorbent with superior drapability and dye ability, stated Wen Wei, technical manager for McMaple. "It is ideal for the hot and dry weather environment apparel, from dresses, tops to shirts, and this rayon fabric is completely opaque."

McMaple is also helping the fashion industry to take first-mover advantages with its digital printed rayon fabrics. McMaple has launched the new digital printing technology which enables garment manufactures launch a new product in a short time through creative idea, prototype to bulk production.

Compared to dye printing, digital printing has a higher productivity, the printing quality is more steady and robust, and can also produce small quantity products in a quick time for prototype and bulk production. McMaple utilises the digital printing technology to print more customised patterns and colours.

Headquartered in Hong Kong, China, McMaple has facilities in Zhejiang, and sustainable suppliers in Shandong. McMaple also has office in Shanghai, and warehouse in Shaoxing, Zhejiang.

Iran to sign 4 contracts with foreign auto-makers

Head of Iranian Mines & Mining Industries Development & Renovation, known as IMIDRO Mansour Moazemi said that Iran is going to sign 3-4 new car industry contracts with leading carmakers by early 2017.

He said that Iranian car market will be never open for arrival of cars ready to be used, adding foreign auto-makers can resume activities in Iranian market in case they can use potential of Iranian local carmakers and export their products.

Moazemi noted that companies like Peugeot and Citroën and other firms entering Iran in future, should export 30-40 percent of cars manufactured in the country.

Managing Director of Renault Pars Company Peiman Kargar said that Renault Kwid would be definitely produced in Iran, adding it is still unclear which partners of the company is going to produce the car.

He said that the price of the vehicle in Iran is still unclear.

He said that Renault is working in Iran under permission of Iranian Ministry of Industry, Mine and Trade and would never impose any policy which runs counter to positions of the ministry to its Iranian company.

Austrian trade delegation embarked for Iran

A high-ranking trade delegation from Austria's Vorarlberg Commerce Chamber made a trip to Tehran in early November, the portal of Tehran Chamber of Commerce, Industry, Mine, and Agriculture (TCCIMA).

The delegation comprised of Austrian businessmen and industrialists active in various fields such as house construction, textile, petrochemicals, machineries, services, and etc., will meet their Iranian counterparts in TCCIMA building on November 7 to negotiate future cooperation.

Iran, Russia to establish joint Islamic bank

Russian officials say Moscow is working on an ambitious plan to establish a joint Islamic bank with Iran – a move that can not only help promote their banking ties but also provide them with a wide banking network of Muslim countries.

The announcement was made by Russia's Energy Minister

Alexander Novak who visited Tehran earlier this week for talks on expansion of mutual cooperation in a variety of areas.

"The creation of a Russian-Iranian Islamic bank was discussed. Our banks are exploring the mechanism, the related decision has not been made yet," Novak was quoted by the media as saying at a bilateral meeting held in Tehran.

No timeframe or potential size was given for the proposed bank, which would be the first such institution operating in the two countries, Reuters wrote in a report on the move. State-linked Russian lenders Vnesheconombank, Sberbank and Tatfondbank have been developing Islamic financial products of their own over the past year, it added.

Iran is keen to diversify funding options for its companies. At present, most financing in Iran is sourced from domestic lenders with only a small portion sourced from foreign sources and the debt capital markets.

Other reports by Iran's domestic media emphasized that Tehran and Moscow were moving close to a scheme to ditch the dollar and trade in their own local currencies.

The first national encyclopedia of Iranian fashion and attire has been published in Iran

It introduces its readers to the fashion industry of the Islamic Republic. The book will be presented at the international exhibition of clothes "Daheye Fajr" in late January 2017.

The encyclopedia was published in cooperation with fashion experts and fashion designers, the Ministry of Culture, Islamic guidance group- Majlis Commission, radio and television of Iran and university centers and other associations. The encyclopedia was published by the cultural association Gagnus (translated from Persian-Phoenix). It consists of a single 300-page volume. In the annex there is also an atlas which serves as a guide to the world of Iran's fashion and clothing. The authors hope that the encyclopedia will be an excellent resource for anyone interested in fashion. They also noted that in today's world there are so many brands and fashion houses that are actively advertised in the Iranian press and various blogs that the local consumers are actually not familiar with Iranian designers and local clothing manufacturers. Hence, with the help of this book, the authors hope that Iranians will be able to get better acquainted with the local fashion industry.

Iran Textile News

Foreign Companies Eager to Invest in Iran

Iranian Economy Minister Ali Tayyebnia said many foreign companies have shown interest to invest in Iran's development projects, and voiced Tehran's preparedness for providing such firms with the needed facilities.

"Iran's economic organizations and institutions, including the country's stock market, are ready for development of mutual cooperation with the world economic institutions as they have also said that they are eager for the same," Tayyebnia said.

The Iranian economy minister reiterated that Iran has already prepared incentive packages for absorbing foreign investment in the free trade zones, including 20-year tax exemption.

"Visa removal and facilitation of foreign investors' presence in the free trade zones are other parts of the incentive package," Tayyebnia added.

In relevant remarks in September, Iranian energy economist said, the local oil industry has appealing features for foreigners who, considering the conditions in the wake of nuclear deal, have kept their hopes of investment in the Islamic Republic alive.

"In the post-sanctions era, there are apt opportunities for Petroleum Ministry to materialize its oil industry development projects," Mehran Amir-Moeini said.

According to the fellow researcher at the Tehran-based Institute for International Energy Studies (IIES), cooperation and interaction of the Petroleum Ministry and other responsible bodies cooperating with the ministry could facilitate attraction of foreign capital to the industry.

Saying that cost of construction of production units in the oil industry had been halved, the energy expert added that national determination was needed to launch new oil projects in the country with the investment of foreigners. The negotiations' process with foreign investors, he suggested, has to be cut down to boost development projects.

Iran exports goods worth \$28b in eight months

Iran exported \$28.17 billion worth of goods and gas condensates in the past eight months to November 20, the head of "Iran Trade Development Organization" said.

Mojtaba Khosrowtaj told that the figure registers 5.7 percent increase compared to that for the same period last year. Khosrowtaj, also deputy minister of industry, mines and trade, said that in the past seven months to October 21, \$170 million worth of machine carpet and moquette and \$166 million worth of hand-woven carpets were exported from the country.

During the same period, \$103 million worth of pharmaceuticals and medical equipment were exported from Iran, up by 50 percent compared to the corresponding period last year, he said. According to Iran's Customs House, Iran's non-oil exports last year stood at \$42.415 including \$6.664 billion worth of gas condensates.

Iran has set an export target of \$50 billion worth of goods and gas condensates for the current Iranian year (started March 21).



INDIA INTERNATIONAL TEXTILE MACHINERY EXHIBITIONS SOCIETY

10th India International Textile Machinery Exhibition 2016

More than 1000 exhibitors from 38 countries participated in this six-day show
Innovation and modernization in textile industry to be the focus

. The six-day event was inaugurated by Mr. Sanjiv Lathia, Chairman, in the presence of Ms. Seema Srivastava, Executive Director, India ITME Society. Hosted once in four years, India ITME has grown to be as one of the largest in this sector globally. The exhibition concluded on December 08, 2016

The event provided an effective platform for joint ventures and collaborations between the stakeholders of textile industry in India and overseas. 1050 exhibitors from 38 countries were displaying world's state-of-the-art machines and technologies. The 10th edition also witnessed launch of 24 products besides discussions, knowledge sharing, profiling of artisans, photography exhibition, etc. Foreign & domestic business leaders, academicians, research scholars, government officials from countries such as Philippines, Myanmar, Bangladesh, Sri Lanka, Iran, Turkey, Brazil, Indonesia, Poland, Malaysia, Kenya, Ethiopia, Egypt, etc. were visiting India ITME 2016. India is not only a strong market but also is explored as a hub for training and skill development by many countries for textiles and textile engineering.

India ITME Society is four-decade old non-profit organization with a vision to support the industry through exhibitions facilitating investments and joint ventures and technology transfer.

State of Gujarat and State of Karnataka are participating in this event as state partners. This event is also supported by Department of Heavy Industry, Govt. of India, Textile Ministry, Government of India and Government of Maharashtra making it the most important platform between governments and the industry members to interact and work together. The idea of "Make in India" in textile engineering was promoted to the visiting foreign business visitors and also propagate government schemes and incentives for the textile industry in India.

The textile sector is one of the largest contributions to India's exports with approximately 11% of total exports. India's overall textile exports during F.Y.2015-2016 stood at US\$ 40 billion and the industry is expected to reach US\$223 billion by 2021.

The textile industry is the second largest employer in India after agriculture. It is felt utmost necessary that Indian textile machine manufacturing industry needs to strengthen its base for quality output and efficiency through innovation and best technologies

available anywhere in the world. India is now developing in manifold in most of the sectors especially in the spinning machinery manufacturing segments. Senior officials from Universities in Bangladesh, Philippines, Myanmar, Ethiopia, etc. visited India ITME-2016 to interact with Indian educational and technology institutions for graduate students/faculty exchange program. India ITME 2016 had participation from institutes in India and abroad such as The Technological Institute of Textile & Sciences, Bhiwani (TIT), DKTE Society's Textile & Engineering Institute, Ichalkaranji, Institute of Chemical Technology, Mumbai (ICT), The Textile Institute of UK, National Institute of Fashion Technology (NIFT) and design from MIT Institute.



India ITME-2016 is not just about business. It would also about creating a platform for Indian students and craftsman to showcase their talent and creativity to the world. Amidst whirring of the modern machineries, "Weavers of Maharashtra" shall display the magic of creating beautiful weavers of HIMROO, PAITHANI, BLOCK PRINTING, TIE DYEING. – Traditional fabric craft of state of Maharashtra.

Photo art gallery displayed "wild life and ethic India" by renowned photographers Dilip Bhatia and Hari Santharam added to the visual delights of the visitors. The creative design from the students of MIT Pune & Experience the colours fabrics, fusion of modern and aesthetic fashion from National Institute of Fashion Technology (NIFT). Put a stitch and participated in creating a global textile artwork at India ITME-2016.



DOMOTEX asia / CHINAFLOR 2017

21-23 March 2017 Shanghai New International Expo Center, China



Second North American Distributor Delegation set to attend DOMOTEX asia/CHINAFLOR 2017

press
release

For the second year in a row, DOMOTEX asia/CHINAFLOR will host a delegation of leading North American distributors to meet with suppliers from China and Asia. The week-long event will include guided factory tours and previews of product and new emerging technologies as well as a chance to visit exhibitors of the 19th edition of DOMOTEX asia/CHINAFLOR which will take place March 21-23, 2017, in Shanghai, China. Building on the success of last year's program, the goal is to facilitate further collaboration between the two groups. While Asia is known to be a leader in product development and innovation, doing business in Asia can still be daunting for many North American companies. "This trip is designed to break down the barriers between Asia's leading suppliers and North American distributors through greater understanding and shared business objectives," said Santiago Montero, former long-time publisher and editor in chief of Floor Covering Weekly, who has been tapped to lead next year's delegation. "This first-hand look at the quality and scope of Asian manufacturing operations will help foster new ties with North American distributors. Through a series of guided factory tours and face-to-face meetings, along with frank peer-to-peer discussions among group members themselves, we know we can help distributors deepen their ties with Asian manufacturers to help their businesses grow and thrive in today's highly competitive market."

Enos Farnsworth, director of distribution for Denver Hardwoods, noted, "The 2016 Distributor Delegation trip to DOMOTEX asia/CHINAFLOR was the most productive trip of the year. This was my first trip to China and I was overwhelmed by the innovation and quality of the manufacturing facilities. In fact, we scheduled follow up meetings with 3 manufacturers; the new partnerships we developed are part of a private label program our Consolidated Distribution Network will be launching in Q1, 2017. I was impressed with the DOMOTEX asia/CHINAFLOR show, not only the size of the booths and the participation, but I felt I previewed some of the latest technology that would be introduced in the United States."

Jeff Jaeckle, president, Jaeckle Distributors, added, "For me, the trip confirmed that the major factories in China are definitely high quality operations. I was very pleased with the technology and investment I saw, as well as product development. Being there also expanded my education on dealing with China on a direct basis. And just as importantly, it's not often when you have the

opportunity network and trade ideas with a great group of peers for five days straight. It was an excellent experience."

The 2017 Delegation will include some of North America's leading distribution companies, including J.J. Haines, Herregan, A-M Supply, Abraham Linc and others.

In addition to hosted factory tours, delegates will attend DOMOTEX asia/CHINAFLOR, one of the flooring industry's largest and most exciting international events. With 140,000 sqm of exhibit space and over 50,000 attendees from all over the world, the event delivers an unparalleled opportunity to see products that are making their debut for the first time.

Two lucky attendees will win a spot with the delegation through a dedicated online drawing. The entry is open to qualified owners/executives or buyers of North American based distributors or retail organizations who fill and submit the participation form at http://www.domotexasiachinafloor.com/sites/default/files/2017_us_delegation_-_application_form.pdf The deadline for applications will be January 15th, 2017.

"I've attended DOMOTEX asia/CHINAFLOR for nearly 10 years now and each year I find something new and exciting in product development as well as a renewed effort by Asian suppliers to become more meaningful to their North American business partners," added Montero. "It truly has been a transformative experience for the global flooring industry."

DOMOTEX asia/CHINAFLOR 2017 will take place March 21-23, 2017 in Shanghai, China. The online registration portal is now open and admittance for pre-registered visitors is free.

For more information about the show visit

www.domotexasiachinafloor.com

About DOMOTEX Worldwide:

DOMOTEX HANNOVER (January 14-17, 2017) is the world's leading floor covering trade show. Deutsche Messe AG Hannover organizes the show.

DOMOTEX asia/CHINAFLOR (March 21-23, 2017 in Shanghai) is the largest international flooring show in the Asia-Pacific region. VNU Exhibitions Asia, Build Your Dream and Hannover Milano Fairs Shanghai, a subsidiary of Deutsche Messe, jointly organize the show.

DOMOTEX Turkey (May 22-25, 2017 in Gaziantep) serves the Turkish and Middle Eastern markets. Hannover Messe International Istanbul, a subsidiary of Deutsche Messe, organizes the show.

- The printing press should be pulled to the fabric to be printed. After printing, it should be stapled in the print cartel.
 - If the printing is interrupted for any reason, the pH of the dyes should be checked before starting to print again.
 - Critical patterns should be printed first and the printed part should be moved according to flicker-washing and finishing result.
 - It is useful to wash the printing blanket with time, hot water.
 - Blankette thermoplast deposition should be checked to see if small cavities are formed.
 - The brushes of the printing blanket wash must be pulled and checked when the machine is turned off.
 - Adhesive pile-receiving template should be used to take the piles when pressing fabrics of cotton or suede.
 - It is beneficial to place the paver in the entrance of the printing machine.
 - If we are using underground waters, we must attach a screen gland to the end of the pumps to prevent sand from coming from the water.
 - The templates of the backup pattern should be checked and checked before printing is finished. The required templates should be rutched.
 - When entering the print we have to use the appropriate end guide. As these guides are constantly exposed to heat over time, their strengths are lost and broken. We have to change the guidelines with certain periods.
 - To bond the fabric to the blanket, we can draw a thermoplast to the blanket, or we can give PVA with a knife. At the entrance of the rotation presses the PVA boat is located. The PVA is supplied to the blanket by means of a scraper.
 - Polyester fabric sometimes weighed paint when we pressed it, we dyed the paint several times. We prepared the Pati beforehand, pressed the pat tanks and waited for 24 hours.
- In filmdruck printing, we were careful to choose the appropriate size. While printing, the craftsmen made sandpaper to the memories of the captains.

Both the templates, if necessary, should be washed thoroughly with filmdruck printing molds. Otherwise, the template and the molds may become clogged. We lose time to open them.

Fabrics subjected to abrasion printing should be given 10 gr / lt Ludigol while being subjected to drying in RAM. Ludigol prevents the degradation of the paint, the background color, and the distortion of the fine motifs and images of the scenes.

Polyester Printing;

- Color thickening: The colors in the mixture are multiplied by the desired percentage amounts. If it is darkened by 20%, 20% of the printing dyes are added to the pat.
- Opening color: The amount of paint remains the same, the pat is added to the desired size. For example, if 20% is opened, the amount of pat is increased by 20%.

In printing, root expansions are 1/1, 1/3, 1/5, 1/7.

Thickening: Holds the tints of the printing dyes but has a low viscosity, ie the paint is fine then thickened by the addition of thickener. To lose color tones, we add as much paint as the percentage of pat.

Thinning: If the viscosity of the blend is high, ie very thick, the blend is diluted by adding water. The paint is added in proportion to the percentage of water added. The pH is adjusted by the addition of acetic acid.

When the fabric does not stick, we will emulsify and stick to it. We prepare 200 liters of water for this. We add 1 kg of emulsion and 1 kg of spirit into it.

After printing:

- 2 report sizes are sampled from the appropriate speed and pressed part.
- Ground control is done in the fabric of the dock.
- Additional dyes are checked.
- Is it spreading paint? .
- Print the speed, number, and press parameters of the job order card.
- The backstop and the machinist are often checked for interrupted fabric.

During stopping:

The sample is taken.

If there is any waiting (such as fabric waiting or malfunction), machine cleaning should be done.

Ekrem Hayri Peker
chemical engineer

WE SHOULD BE BEWARE WHAT YOU PRESS TO FABRICS.

I want to share some of your experiences with you;

The oppression that started with stone printing made it possible to reach a wider consumer mass by the oppression of printed textile products. The patterns were laid on the fabrics which were fixed to the one meter wide and 25 meters long mask and the design was printed. The pattern was drawn on the silk fabric which was passed through the wooden casket. The designs did not have a few colors. In Bursa, tile cloth and scarf fabrics were printed with table printing until recently. Today's octopus is the pressure of the so-called table based printing.

Filmdruck forms the basis of printmaking. Increasing demand for printed fabrics has brought mechanization to this area. He took blanket made of special rubber that moved the place of the table. Patterns were passed to the fabric by the movement of dirt or steel bars in the molds placed on the edges of the printing machine. In this way patterns and colors that do not exceed two or three molds have been removed to 12 molds and colors. According to the pattern report, the daily production of the machine reached 6-15 thousand meters. New technological developments The blanket width has increased to 400 cm. The technological advances in this area have allowed the pressure to reach 64/90/120 cm respectively. There are 64, 82, 91, 101 reports on the rotation prints. The rotating dyes are fixed on the knife while the blanket moves in the printing machines. The rotating dyes are transferred to the fabric with the help of the knife. The fabric from the press comes to the fixer for fixing. Printing methods have also developed with the development of printing machines. Cotton, linen, silk fabrics, then polyester fabrics and blends are also started to be printed. These; Pigment, reactive, ronjuan and disperse (pigment abrasion, disperse abrasion, acid, nylon)

Rotational printing makes it possible to print 16 and 24 color patterns on 10-12 molded and custom made machines, thus reducing printing costs. Rotation pressure is not the only thing that suits small quantities. The change of the pleasures of the consumers, the change of the likes, pushed the producers to search for the printing of smaller items and the production of digital (inkjet) printing machines. Because the digital printing design is prepared in the computer environment, the report does not have any problems. At the beginning of the 1960's, Rotork printing technology was found. The transition to digital printing was in early 1996's.

We must carefully control everything to reduce the fires of printed fabrics.

- First of all, make eye examinations of all the people working in the printing presses in the printing department. Employees with eye disorders are hardly aware of their mistakes.
- Exit sections of fabric should be illuminated with panel illumination, like a pharmacy, without drying of fabric entrance and printed fabrics.
- Replacement fabric dies should be brought to the press.
- The template and patterns of the next print should be ready.
- The yarn wrapped in the printing input rollers should be cleaned frequently.
- The inside of the clothes should be cleaned with certain periods, and the institutions that accumulate in the drying should be prevented from polluting the fabrics. We have to ventilate often.
- Molds and templates should be kept in the light and checked for clogged places before entering the print shop. Otherwise, some of the patterns on printed fabrics will not come out, it will be a waste. The printing is interrupted and the stuffy areas open. This means loss of production. - The template and pattern sequence must be in finez-contour-lab form and the background template should be left to the end.
- Take precautions against the risk of staining the templates, if necessary, leave a gap between the templates.
- We must make the paint template or mold order before printing.
- The paint should be washed in the same washing conditions by making a fix in the fixation heat of the pattern to be pressed. Otherwise, the colors may mislead us.