SASMA

DEC' 24

NEWS LETTER

GROUND FLOOR, SASMIRA, SASMIRA MARG, WORLI, MUMBAI – 400 030. TELEPHONE: 022-69776030

ABOUT SASMA

Shri. Mihir R. Mehta - Chairman

Smt. Smita A. Yeole – Vice-Chairperson

- Synthetic & Art Silk Mills' Association Ltd. (SASMA) is the oldest organization in the Country representing Man-made Textile Industry.
- SASMA was established in 1939-40 and is registered under the Companies Act.
- It has been providing yeoman service to the Man-made Textile Industry for Eight and half decades.
- SASMA is the parent organization in the man-made Textile Industry and is instrumental in establishing The Synthetic & Art Silk Mills' Research Association (SASMIRA), The Rayon Mills Commercial Corporation Ltd. (RMCC), Rayex (India) Ltd. (RAYEX), and Federation of Indian Art Silk Weaving Industry (FIASWI).

SASMA Board Members	
1. Shri Mihir R. Mehta	7.Shri Kapil A. Shorewala
2. Mrs. Smita A. Yeole	8. Smt. Darshana Doshi
3. Shri. Bharat S. Parekh	9. Shri Bharat Gandhi
4. Shri. Gokul K. Mehta	10. Shri Rohit C Patel
5. Shri S.S. Khetan	11. Shri Dinesh S Zaveri
6. Shri Viresh Kamdar	

MAJOR OVERHAUL OF CUSTOMS DUTY ON OVER 100 ITEMS LIKELY IN FY26 BUDGET

The Indian government's move to overhaul customs duties in the FY26 Budget aims to correct the inverted duty structure, where raw materials and intermediate goods are taxed higher than finished products. This structure distorts domestic manufacturing, making it less competitive. The proposal is part of a broader initiative to align India's trade policies with global dynamics, as emphasized by Finance Minister Nirmala Sitharaman in the FY25 Budget speech.

Key Points:

Inverted Duty Structure: This refers to a situation where duties on inputs (raw materials, intermediate goods) are higher than those on finished goods. This creates a disincentive for local manufacturing of intermediate goods, as it's cheaper to import the finished products.

Proposed Overhaul: The government plans to adjust customs duties on over 100 items, including information technology hardware, automobile parts, and textiles. These changes are expected to address the concerns raised by the industry, which has advocated for reduced tariffs on inputs.

Industry Input: In response to the need for reform, the Confederation of Indian Industry (CII) has proposed that duty changes be based on consultations with industry stakeholders in each sector. They also suggested reviewing existing Free Trade Agreements (FTAs) and exemption notifications to ensure the duty structure is fair and logical.

Strategic Importance: As per Niti Aayog's report, India is aiming to significantly boost its electronics sector and integrate more fully into global value chains. The government's tariff restructuring could help meet the ambitious target of growing the sector's value to $500 billion by 2030, from just over $100 billion currently.

Review and Simplification: The government has committed to simplifying and rationalizing the customs duty structure, making trade easier and more predictable, and reducing disputes.

Implications:

For Manufacturers: A more rationalized duty structure should lower the cost of production for many sectors, especially those heavily reliant on imported raw materials and intermediate goods. This could boost domestic manufacturing, improve competitiveness, and foster innovation.

For Global Trade: Aligning India's duty structure with global norms may help integrate India more closely into international supply chains, particularly in sectors like electronics, automobiles, and textiles.

For Consumers: In the medium to long term, the reduction in production costs could lead to lower prices for goods, benefiting consumers. Additionally, removing distortions in the duty structure could encourage more domestic production, creating jobs.

The government's push to overhaul the tariff system, while part of broader economic reforms, is clearly intended to foster more sustainable growth by making domestic manufacturing more cost-competitive and globally integrated.

The inverted duty structure is a significant issue faced by multiple industries in India, including electronics, textiles, apparel, leathers, automotive parts, telecommunications, and toys. This structure means that raw materials and intermediate goods attract higher import duties than finished goods, creating a cost imbalance for manufacturers.

Key Points:

1. **Current Duty Structure:**

- Raw materials: Import duties are often higher than on finished goods.
- Intermediate goods: Similarly, they face higher tariffs than finished products.
- Finished goods: These often benefit from lower duties, exemptions, or concessional rates under various Free Trade Agreements (FTAs).

2. **Government's Intent:** The government has traditionally encouraged firms to source inputs locally rather than relying on imports, thereby imposing higher duties on raw materials and intermediates. However, many Indian manufacturers are heavily reliant on imported inputs, which leads to higher production costs.
3. Recommendations by CII: The Confederation of Indian Industry (CII) has proposed a new duty structure:

- Raw materials: 0-2.5% import duty
- Intermediate goods: 2.5-5% import duty
- Finished goods: 7.5-10% import duty

This structure aims to correct the inverted duty issue by reducing duties on raw materials and intermediates, while keeping reasonable tariffs on finished goods.

Vimal Pruthi, tax partner at EY India, highlighted that the inverted duty structure is a challenge across various sectors. He pointed out that removing these anomalies would have multiple benefits:

- Boost domestic production: Lower duties on inputs would reduce manufacturing costs, encouraging local production.
- Reduce imports: By making domestic production more competitive, the need to import finished goods would decrease.
- Enhance competitiveness: With lower costs, Indian manufacturers would be better positioned to compete globally.

Pruthi also emphasized that many finished goods benefit from duty exemptions or concessional rates under FTAs, while inputs are subject to higher duties. He suggested that the government should review these situations and consider providing concessional rates or exemptions on inputs in similar cases, ensuring that domestic manufacturers are not unfairly disadvantaged.

Harsh Bhuta, a partner at Bhuta Shah & Co, emphasized the need for rate rationalization in critical sectors like steel, aluminium, solar batteries, lithium batteries, and polymers to enhance domestic production. Bhuta's comments point to the importance of aligning taxes and duties in these sectors to support manufacturing capabilities within India.

In contrast, Sanjay Kumar Agarwal, the Chairman of the Central Board of Indirect Taxes and Customs (CBIC), responded by noting that the correction of inverted duty structures (where input duties are higher than output duties) is not always straightforward. He clarified that what might initially appear as an inversion could sometimes not be so, as the value of certain raw materials could play a role in the final product.

This discussion comes after the Indian Finance Ministry's adjustments in the Budget for FY25, which involved changes to the Basic Customs Duty (BCD) on various products, including mobile phones, electronics, gold, silver, and critical minerals. These revisions were aimed at supporting the growth of domestic manufacturing.

REFERENCE: https://www.mca.gov.in/content/mca/global/en/home.html.

1. Introduction

Aramid fibers (AFs) are a class of high-performance organic polymer fibers known for their outstanding mechanical properties, heat resistance, and chemical stability. Since their invention in 1964, Aramid Fibres have become indispensable materials across a wide range of applications from aerospace and defence to sports equipment and electrical insulation. [1–5]. The unique properties of aramids are attributed to their molecular structure consisting of aromatic rings linked by amide groups. The high degree of molecular orientation achieved during the spinning process also imparts strength and stiffness along the fiber axis. Commercial AFs are predominantly based on two polymers – poly (p-phenylene terephthalamide) (PPTA) marketed as Kevlar and Twaron, and poly (m-phenylene isophthalamide) (MPIA) known commercially as Nomex. Recent years have also seen the emergence of other speciality aramids such as poly (p- phenylene benzobisoxazole) (PBO) and heterocyclic aramids with enhanced thermal and chemical resistances [6- 9]. A range of dry and wet spinning techniques have been employed over the decades to produce commercial AFs. The choice of spinning process depends on the polymer type, desired fiber properties and process economics. An overview the different spinning methods along with key developments in aramid spinning technology is provided in this review. More recently, the fabrication of aramid nanofibers has also garnered attention given their potential to achieve superior mechanical performance and multifunctionality compared to conventional aramids. Current research trends in this emerging area are examined[10]. Overall, this review provides a comprehensive outlook on the different spinning methods employed for manufacturing AFs along with key milestones in process development over past decades. Advances in the spinning of aramids for tailored applications as well as early efforts on novel AFs have also been discussed. The challenges and opportunities for future innovation are highlighted.

2. Development History of Aarmid Fibres

In the 1960s, the development of AFs, driven by the need for heat-resistant and strong materials, marked a significant milestone. DuPont led the way by introducing Nomex, a meta-aramid fiber, in 1967, followed by the higher- performing para-aramid fiber, Kevlar, in 1971. Kevlar quickly found applications in diverse fields such as protective gear, tyres, ropes, and composites. Despite early research by Soviet scientists on high-strength heteroaromatic fibers like SVM in the 1970s, challenges in the spinning process and mechanical properties hindered commercialization compared to Kevlar. In the 1980s, Russia overcame these challenges and introduced the para-aramid Terlon. Other major

producers, Teijin and AkzoNobel, later introduced meta- and para-aramid fibers, namely Technora and Twaron. The 1990s saw the introduction of high- temperature-resistant poly (p-phenylene benzobisoxazole) (PBO) fibers as advanced 'super fibers.' Recently, South Korean and Chinese companies have actively developed domestic production capabilities for both commodity and speciality aramids. Over the past five decades, continuous refinement of manufacturing processes has improved uniformity, tensile strength, modulus, and other properties of AFs, meeting diverse application needs. Aramid spinning technologies have evolved, enabling rapid scale-up from lab- based research to high-volume industrial production. Advances in AFs technology have significantly enhanced the strength of AFs fibrous products, making them crucial for cutting-edge applications. The global manufacturing engagement in AFs and related composites reflects their increasing demand across sectors like ballistic protection, energy, equipment manufacturing, and intelligent wearable's. The growing number of annual publications and citations related to AFs underscores the ongoing advancements and widespread applications of these materials over the past few decades. [11].

Table 1: . The history of commercial Aarmid Fibres [6]

Year of Invention	Name of Inventor
1967	Dupont Nomex
1970	Armos and Dupont Kevlar
1972	SVM (superhigh-strength and high-modulus)
1978	Teijin Conex
1985	Teijin Technora
1986	Terlon
1990	Nobel Twaron
1995	Rusar
2004	PBO Fibre
2006	Tayho Tametar
2009	Kolon Heracron
2011	Hyosung Alkex
2018	Tayho Taparan

3. ***Invention of lyotropic liquid crystals***

In a solution, a flexible polymer chain assumes a random coil shape as shown in Figure 1 (a), while rigid chains, composed of stiff units, display a rod like structure as shown in Figure 1(b).

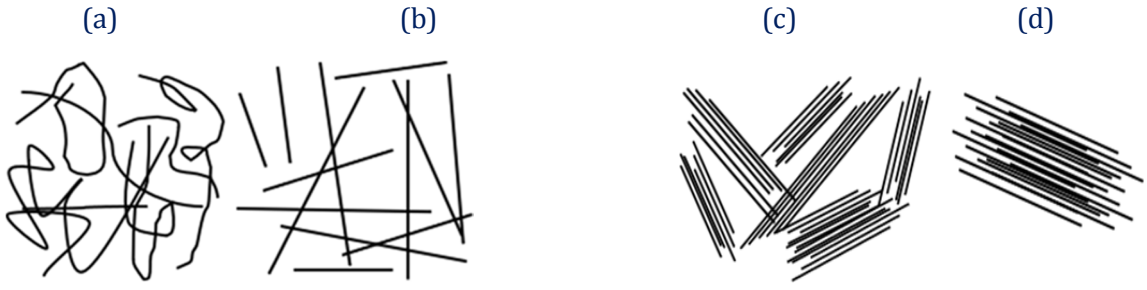
(b). As the concentration of rigid molecular chain polymers increases, molecular chains densely pack together as shown in Figure 1 (c). Flory's equation [12] predicts the transition from an isotropic to an anisotropic phase beyond the critical concentration ψ*, where ψ* decreases with a higher axial ratio (x) or molecular rigidity [13].

$$\psi* = \frac{1}{8}\left(1 - \frac{2}{x}\right) \ldots (1)[14]$$

Hence, polymers with a high axial ratio, particularly those rigid or stiff, are preferred for creating anisotropic solutions. These solutions form liquid crystals with domains where molecules align uniformly (director), facilitating extended molecular chain structures as shown in Figure 1(d)[12]. Viscosity generally increases significantly below the critical concentration as shown in Figure 1[15].

A notable exception, discovered by Kwolek, defied this trend. Above the critical concentration, p-aramid solutions exhibited opacity, and viscosity sharply decreased. This breakthrough led to the development of high-modulus, high- strength fibers, exemplified by the commercially successful Kevlar® (Fiber B) in 1971, surpassing traditional fibers like polyester tyre yarn in tensile strength and modulus. Before DuPont's p-aramid, Monsanto had introduced X-500[16], a polyamide-hydrazide. Post-Kevlar's success, researchers explored various aramids, developing solvent-free liquid crystalline polyacrylates to eliminate costly solution processing. Notably, these new stiff polymers predominantly feature a linear backbone.

Figure 1. Schematic representation of polymer state in solution



a. Random Coils

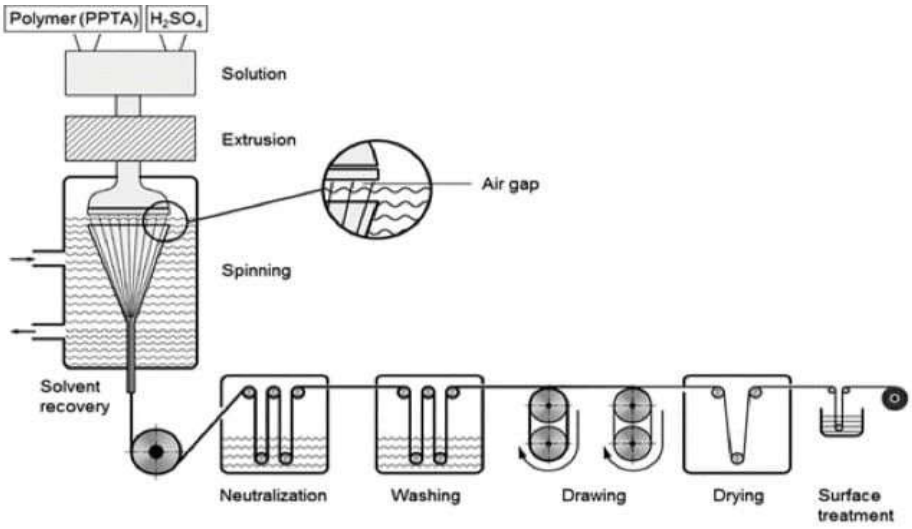
b. Random Rods

c. Rods in liquid crystalline arrays

d. Nematic state for one array

4. Aramid solution

Aramid polymers possess a high melting point, often surpassing their decomposition temperature. This characteristic renders the melt spinning of aramids impractical. Consequently, aramid fibers are manufactured through solution spinning. However, dissolving aramids poses a challenge due to their rigid structure. Typically, highly polar solvents, either with or without inorganic salts or strong acids, are employed for dissolution. Homopolymers like poly (m-phenylene isophthalamide) (m- DPI) can produce isotropic solutions in solvents such as N- methyl-2-pyrrolidone (NMP) and DMAc. In the case of p- aramids, solubility can be enhanced through copolymerization, as discussed earlier. Notably, p-aramids form isotropic solutions only at low polymer concentrations. For instance, poly (p-phenylene terephthalamide) (PPTA) achieves isotropic solutions at concentrations below 10 wt% and ambient temperature [1].



Semirigid polymers exhibit molecular orientation under external forces like electrical, magnetic, shear, and elongational flow. This behaviour is evident in lyotropic solutions, such as poly(p-benzamide) and PPTA. The molecular orientation of rod-like molecules of PPTA along the axis, with the degree of orientation denoted by β ranging from 9° to 12°. Factors like solution concentration, solvent, the molecular weight of the polymer, and temperature influence orientation and phase behaviour in lyotropic nematic polymer solutions. In the case of PPTA in 100% sulfuric acid, viscosity and molecular arrangement are concentration-dependent, forming smectic and nematic phases in liquid crystals[1].

Depicts the viscosity and molecular arrangement changes with concentration. At lower concentrations, viscosity initially increases with little or no crystal domain orientation. However, at higher concentrations (18–23% PPTA), viscosity decreases as crystal domains perfectly orient, exhibiting anisotropic behaviour. This concentration range, with low viscosity and highly oriented polymer, is

crucial for spinning. In contrast to isotropic polymers, where increased viscosity is expected with concentration, lyotropic solutions show decreased viscosity due to the formation of the nematic liquid crystal phase [1].

For solution spinning, low viscosity at high polymer concentration is essential. A phase diagram for PPTA in 100% sulfuric acid, where the critical concentration depends on molecular weight and temperature. Dopes at concentrations of 18–23% are solid up to about 80°C, necessitating melting before spinning. Conversely, for coagulation at low temperatures, dry-jet-wet spinning is employed. In this process, the spinning of PPTA in the nematic phase leads to fiber precipitation in the air gap, with acid removal occurring in the coagulation bath. The phase diagram indicates that dopes up to 10% concentration have low viscosity and can be wet-spun [17].

Applications

- Due to their distinctive characteristics, including high strength, low density, compressive strength, low flammability, absence of a melting point (direct degradation above 500°C), and excellent resistance to impact, abrasion, and chemical and thermal degradation, aramids find widespread applications in both reinforcement and apparel- related contexts[18].
- However, the specific applications of m-aramid and p-aramid vary due to differences in their properties. M-aramid, exemplified by Nomex, exhibits excellent thermal resistance and textile properties but has inferior mechanical properties for high-performance fibers. Consequently, it is commonly employed in protective clothing, hot gas filters, industrial-coated fabrics, felt scrims, and the reinforcement of rubberized belts and hoses.
- In contrast, p-aramid, represented by Kevlar, displays unique combinations of toughness, exceptionally high tenacity and modulus, and outstanding thermal stability. As a result, p- aramid is utilized in diverse end-use sectors, including industrial, aerospace, military, and civilian applications, for purposes such as cut, heat, and ballistic-resistant apparel, hard armors, brake and transmission friction components, reinforced tyres and rubber goods, ropes and cables, various composite forms, industrial gloves, and circuit board reinforcements.

Reference

[1] J. M. García, F. C. García, F. Serna, and J. L. de la Peña, “High-performance aromatic polyamides,” Prog Polym Sci, vol. 35, no. 5, pp. 623–686, May 2010, doi: 10.1016/j.progpolymsci.2009.09.002.

[2] M. Lv, F. Zheng, Q. Wang, T. Wang, and Y. Liang, “Friction and wear behaviors of carbon and aramid fibers reinforced polyimide composites in simulated space environment,” Tribol Int, vol. 92, pp. 246–254, Dec. 2015.

[3] F. Wang, Y. Wu, Y. Huang, and L. Liu, “Strong, transparent and flexible aramid nanofiber/POSS hybrid organic/inorganic nanocomposite membranes,” Compos Sci Technol, vol. 156, pp. 269–275, Mar. 2018.

[4] Huaixi Wang, Huimin Xie, Zhenxing Hu, Dan Wu, and Pengwan Chen, “The influence of UV radiation and moisture on the mechanical properties and microstructure of single Kevlar fibre using optical methods,” Polymer Degradation and Stability 97, pp. 1755–1761, 2012.

[5] Amesimeku J, Song WH, and Wang CX, “Fabrication of electrically conductive and improved UV-resistant aramid fabric via bioinspired polydopamine and graphene oxide coating.,” J Text Inst., pp. 110–1484, 2019.

[6] A. He et al., “Advanced Aramid Fibrous Materials: Fundamentals, Advances, and Beyond,” Advanced Fiber Materials, Oct. 2023, doi: 10.1007/s42765-023-00332-1.

[7] M. Ertekin, “Aramid fibers,” in Fiber Technology for Fiber-Reinforced Composites, Elsevier, 2017, pp. 153–167. doi: 10.1016/B978-0- 08-101871-2.00007-2.

[8] D. Tabuani, O. Monticelli, H. Komber, and S. Russo, “Preparation and Characterisation of Pd Nanoclusters in Hyperbranched Aramid Templates to be used in Homogeneous Catalysis,” Macromol Chem Phys, vol. 204, no. 12, pp. 1576–1583, Aug. 2003, doi: 10.1002/macp.200350027.

[9] S. Russo, A. Boulares, A. Da Rin, A. Mariani, and M. E. Cosulich, “Hyperbranched aramids by direct polyamidation of two reactant systems: Synthesis and properties,” Macromol Symp, vol. 143, no. 1, pp. 309–321, Aug. 1999, doi: 10.1002/masy.19991430123.

[10] J. Liang et al., “The Effects of Polyethylene Glycol on the Spinnability of Dry-jet Wet Spinning Heterocycle Aramid Fiber,” Fibers and Polymers, vol. 24, no. 11, pp. 3861–3867, Nov. 2023,.

[11] I. V Tikhonov, A. V Tokarev, S. V Shorin, V. M. Shchetinin, T. E. Chernykh, and V. G. Bova, “CHEMISTRYAND TECHNOLOGY OF CHEMICAL FIBRES RUSSIAN ARAMID FIBRES: PAST – – – – – PRESENT – – – – – FUTURE*,” 2013.

[12] P. W. Morgan, “Synthesis and Properties of Aromatic and Extended Chain Polyamides,” Macromolecules, vol. 10, no. 6, pp. 1381–1390, Nov. 1977.

[13] P. J. Flory, “Statistical thermodynamics of semi-flexible chain molecules,” Proc R Soc Lond A Math Phys Sci, vol. 234, no. 1196, pp. 60–73, Jan. 1956, doi: 10.1098/rspa.1956.0015.

[14] Y. Abe and K. Yabuki, “Lyotropic Polycondensation including Fibers,” in Polymer Science: A Comprehensive Reference, Elsevier, 2012, pp. 469–495. doi: 10.1016/B978-0-444-53349-4.00150-3.

[15] L. G. Close, R. E. Fornes, and R. D. Gilbert, “A 13C NMR study of mesomorphic solutions of poly(p-phenylene terephthalamide),” Journal of Polymer Science: Polymer Physics Edition, vol. 21, no. 9, pp. 1825–1837, Sep. 1983, doi: 10.1002/pol.1983.180210918.

[16] W. Black and J. Preston, High-modulus wholly aromatic fibers: Papers. New York: M. Dekker, 1973.

[17] M. Jassal, A. K. Agrawal, D. Gupta, and K. Panwar, “Aramid Fibers,” in Handbook of Fibrous Materials, Wiley, 2020, pp. 207–231. doi: 10.1002/9783527342587.ch8.

[18] T. Park, B. Lee, J. Lee, Y. Park, and K. Rho, “Method of dry-spinning para-aramid fiber,” US9976234B2, 2018

International News Update – Textile

US Manufacturing Sector Productivity up 0.6% YoY in Q3 2024: BLS

Key Points

- Total manufacturing sector productivity increased by 0.6 per cent YoY in the quarter.
- Manufacturing sector labour productivity increased by 0.9 per cent QoQ in Q3 2024.
- According to the Bureau of Labour Statistics (BLS), the third quarter (Q3) of this year saw a 2.2% quarter-over-quarter (QoQ) and a 2% year-over-year (YoY) increase in the labour productivity of the non-farm business sector in the United States.
- Unit labour costs in the non-farm business sector were revised down 1.1 percentage points to an increase of 0.8 per cent in Q3 2024.
- In the US durable manufacturing sector, productivity increased by 0.7 per cent - 0.1 percentage point downward revision from the preliminary estimate.
- Total manufacturing sector productivity increased by 0.6 per cent YoY in Q3 2024.
- Unit labour costs in the manufacturing sector overall were revised down by 3.6 percentage points to an increase of 1.7 per cent in Q3 2024, a BLS release said

Reference: http://www.bis.gov.

Global growth to be resilient in 2025, 2026 despite key risks: OECD

Key Points

- The global economy is projected to remain resilient despite significant challenges, according to the OECD's latest Economic Outlook, which projects global GDP growth of 3.3 per cent in both 2025 and 2026—up from 3.2 per cent in 2024.
- Inflation in the OECD countries is expected to ease further, from 5.4 per cent in 2024 to 3.8 per cent in 2025 and 3 per cent in 2026.
- The global economy is projected to remain resilient despite significant challenges, according to the Organization for Economic Cooperation and Development's (OECD) latest Economic Outlook, which projects global gross domestic product (GDP) growth of 3.3 per cent in both 2025 and 2026—up from 3.2 per cent in 2024.
- Inflation in the OECD countries is expected to ease further, from 5.4 per cent in 2024 to 3.8 per

cent in 2025 and 3 per cent in 2026, supported by the still restrictive stance of monetary policy in most countries.

- Headline inflation has already returned to central bank targets in nearly half of the advanced economies and close to 60 per cent of emerging market economies, an OECD release said citing the document.
- Labour markets have gradually eased, yet unemployment remains low by historical standards. Strong nominal wage gains and continued disinflation have bolstered real household incomes.
- However, private consumption growth remains subdued in most countries, reflecting weak consumer confidence. Global trade volumes are recovering, with a projected increase of 3.6 per-cent in 2024.
- Growth prospects vary significantly across regions. GDP growth in the United States is projected to be 2.8 per cent in 2025, before slowing to 2.4 per cent in 2026.
- In the euro area, the recovery in real household incomes, tight labour markets and reductions in policy interest rates continue to drive growth. Euro area GDP growth is projected at 1.3 per cent in 2025 and 1.5 per cent in 2026.
- Growth in Japan is projected to expand by 1.5 per cent in 2025, but then decline to 0.6 per cent in 2026. China is expected to continue to slow, with GDP growth of 4.7 per cent in 2025 and 4.4 per cent in 2026.
- The Outlook highlights persistent uncertainty. An intensification of the ongoing conflicts in the Middle East could disrupt energy markets and hit confidence and growth. Rising trade tensions might risk hampering trade growth.
- Adverse surprises related to growth prospects, or the path of disinflation could trigger disruptive corrections in financial markets. Growth could also surprise on the upside.
- Improvements in consumer confidence, for example if purchasing power recovers quicker than anticipated, could boost spending. An early resolution to major geopolitical conflicts could also improve sentiment, and lower energy prices, the Outlook added.

Reference: Economic Times

India approves 2 start-ups in technical textiles

The ministry of textiles has approved two start-ups under the 'Grant for Research & Entrepreneurship across Aspiring Innovators in Technical Textiles (GREAT)' scheme during the 9th Empowered

Programme Committee (EPC) meeting held on 5th December, 2024. Each start-up will receive a grant of approximately 50 lakh (~$5.9 million) to support their innovation and entrepreneurship in the field of technical textiles.

The committee has also approved a grant of approximately 14 crore to 6 education institutes to introduce courses in technical textiles under the 'General Guidelines for Enabling of Academic Institutes in Technical Textiles', the ministry said in a press release.

The approved start-up projects are focused on key strategic areas of sustainable textiles and medical textiles. The approved education institutes have proposed to introduce new B.tech courses in different fields and applications of technical textiles including medical textiles, mobile textiles, geotextiles, geosynthetics, etc.

Reference: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2080962

Finland's Ahlstrom unveils new sustainable PFAs- free filtration media

Ahlstrom has launched a PFAS-free filtration platform with water-repellent properties for air-oil separation applications.

This sustainable solution offers reliable performance without fluorochemicals, addressing the challenges of separating fine oil and water aerosols.

The new media enhances filtration efficiency and durability, meeting stringent regulatory demands.

Ahlstrom, a global leader in innovative filtration solutions, has introduced a groundbreaking PFAS-free filtration platform with water-repellent properties specifically designed for air-oil separation applications. This new solution offers filter manufacturers a sustainable alternative to meet stringent regulatory and performance demands while maintaining durability and reliability.

The air-oil separation market requires high-performance materials capable of efficiently separating fine oil and water aerosols from air streams while maintaining excellent filtration performances. In multilayer filter structures, media treated with water-repellent properties enhances the coalescing effect. This ensures the media remains stable, avoiding increased wet pressure drops and preserving filtration efficiency.

Traditionally, these challenges were addressed using PFAS-based technologies. Ahlstrom's PFAS-free filtration materials eliminate the need for fluorochemicals, delivering advanced water-repellent properties that ensure reliable and robust performance, even in demanding operating conditions. A dedicated test bench supports the development and qualification of multi-layer air-oil separation solutions in collaboration with the customers, the company said in a press release.

As per Mr. Tamara Quatrano, Vice President, R&D and product development, filtration the PFAS-free solution underscores their commitment to innovating sustainable solutions, supporting the transition to environmentally responsible alternatives without compromising performance. Further they are actively collaborating with their customers' R&D teams to further develop and optimize PFAS-free filtration media."

The PFAS-free filtration media is now available through Ahlstrom's glass microfibre production platform in Fabriano, Italy, and is designed for use in industrial applications and sectors.

Reference: https://www.ahlstrom.com/Media.

Teijin Frontier Develops a Next-generation Comfort Material for Active and Functional Apparel

Teijin Frontier Co., Ltd., announced that it has developed a next-generation comfort material that uniquely combines contact cooling functionality with sweat stickiness prevention. The new material features a dual-layer, knit structure. The inner layer alternates Teijin Frontier's newly developed hydrophobic *WAVERON*™ yarn and conventional hydrophilic *WAVERON*™ yarn. The hydrophilic yarn absorbs perspiration, while the hydrophobic yarn prevents it from adhering to the skin to keep the skin dry. The outer layer disperses absorbed perspiration to the outside.

Teijin Frontier plans to promote and sell this next-generation comfort material as a desirable fabric for the 2026 spring/summer sports and outdoor apparel season in both domestic and international markets. In advance of that season, the company aims to sell 100,000 meters of the material. Subsequently, it will expand into functional apparel such as fashion clothing. By fiscal 2028, Teijin Frontier expects to sell 1 million meters of this next-generation comfort material per year.

Cooling Comfort for a Warming Planet

In recent years, due to global warming, sports and outdoor apparel retailers have been demanding clothing with multiple functions, such as contact cooling and perspiration management, to enhance

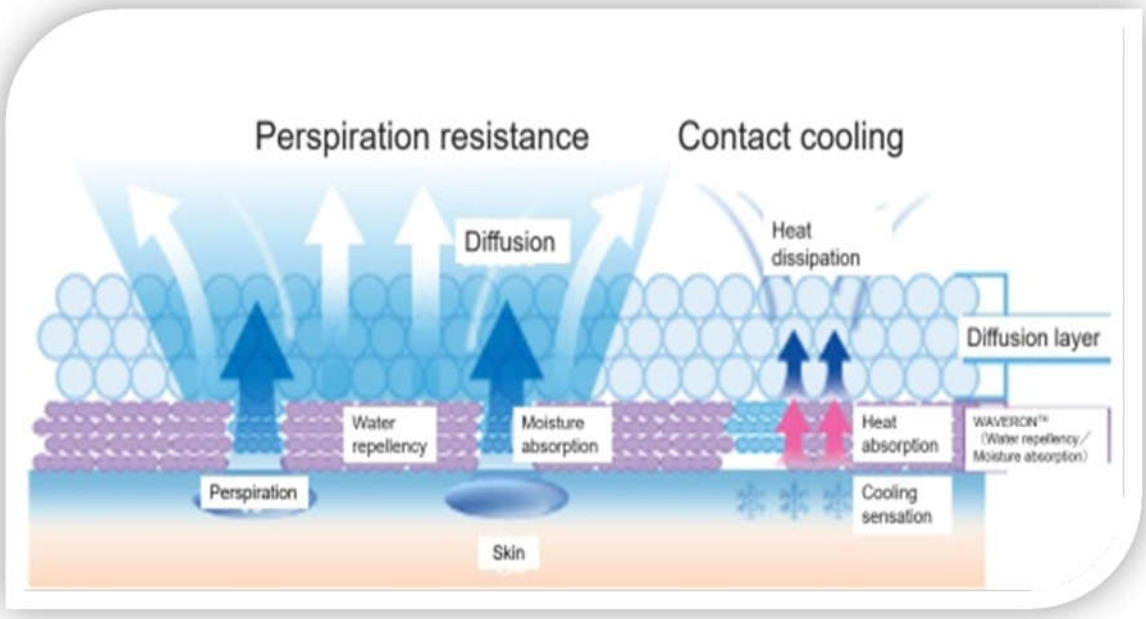
consumers' comfort in elevated temperatures. However, until now it has been challenging to deliver textiles that provide both contact cooling and sweat stickiness prevention. This is because contact cooling requires enlarging the material's contact area with the skin to improve heat conduction from the skin, while sweat stickiness prevention requires reducing contact with the skin.

To resolve this dilemma, Teijin Frontier leveraged the structure and function of two products. One is TRIPLEDRY™ CARAT™, a specially structured polyester fabric that combines perspiration absorption functionality and sweat adhesion prevention through optimal placement of hydrophobic and hydrophilic yarns. The other product is WAVERON™, a full dull, non-crimped yarn with contact cooling functionality. WAVERON™ yarn contains titanium oxide, which promotes a cooling sensation as heat is transferred from the skin to the fibre, and has a flat, cross-sectional shape that increases the skin contact area. Additionally, this non-crimped yarn maximises the air gaps between fibres, offering high breathability. By combining these two technologies, the company was able to deliver both contact cooling and sweat stickiness prevention functions in one material.

Contributing to Sustainability

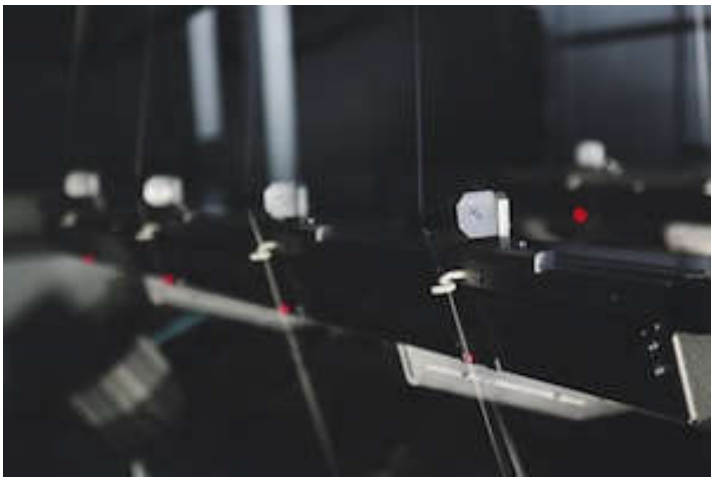
The new material uses 100 percent recycled polyester and features water-repellent technology made without per- and polyfluoroalkyl substances (PFAS).

Reference: https://www2.teijin-frontier.com/english



The Chinese Junma Group Expands High Modulus Low Shrink (HMLS) Polyester Capacities by 20 Positions

ZHANGJIAGANG (Jiangsu Province), China / REMSCHEID, Germany — December 12, 2024 — The Chinese Junma Group has expanded its High Modulus Low Shrink (HMLS) capacities by 20 positions, hence becoming one of the largest tire cord manufacturers in China. At present, the company has 64 positions of HMLS systems, all of which are from Oerlikon Barmag.



The ACW high-speed winder processes HMLS yarn at speeds of up to 6300 m/min.

Junma processes the tire yarn produced in the tire range of 1100 dtex to 2200 dtex in-house into tire cord using the downstream processes of dipping and weaving. The largest HMLS single project for Junma and Oerlikon Barmag to date was put into operation in record time. After just two weeks, the various yarn specifications were approved. “The fact that we achieved the required yarn parameters so quickly shows how reliable our industrial yarn systems are,” says process engineer Li Jiangang. “Our systems guarantee a stable spinning process and reliably produce quality yarns – our many years of experience in the industry help us here.”

Mr. Wang Hongbin, General Manager at Junma, said “We entered the HMLS polyester tire cord manufacturing business in 2008 and at their time, we decided on Oerlikon Barmag systems. All the subsequent expansion stages have confirmed our decision then; today, we are convinced Oerlikon Barmag customers.” Further, Junma supplies its end products to renowned international tire manufacturers and visualize definite growth potential in this segment of the automotive industry.

“This year, we opened our first branch outside of China. And for the coming year, we are planning

setting up of production facility in Thailand," says Wang Hongbin. In doing so, Junma continues to rely on the expertise of Oerlikon Barmag. The HMLS process from Oerlikon Barmag scores particularly highly with production speeds of up to 6300 m/min, at which the core components of high-speed godets and winders demonstrate their reliability.

Reference: https://chinajunmagroup.com/hmlspolyester - OC Oerlikon Corporation AG Pfäffikon published this content on December 12, 2024,

55TH GST COUNCIL MEETING: WHAT TO EXPECT AND WHY THIS MEETING COULD BE CRUCIAL?

The GST Council is expected to address several pivotal reforms focused towards inverted duty structure, GST rate rationalization that will make an impact on the economy and meeting the goal of minimizing cascading effect in GST.

The upcoming 55th GST Council meeting, scheduled to meet on December 21, 2024, is expected to address a range of significant issues that have been lingering for a considerable time. The GST Council is expected to address several pivotal reforms focused towards inverted duty structure, GST rate rationalization that will make an impact on the economy and meeting the goal of minimizing cascading effect in GST.

Reforms related to GST rate rationalization aims to reduce cascading effect of taxes by merging tax slabs, litigation revolving around the issue and other issues related to input tax credit (ITC), leading to construction of a fluid and effective tax environment. The primary concern is blockage of working capital due to accumulated ITC, leading to liquidity issues. This necessitates the need to rationalizing tax rates, ensuring lower tax rates for raw materials in comparison to final goods, streamlining of refund process to improve cash flow, and simplifying compliance requirements. Pursuant to the 45th GST Council, the Group of Ministers (GoM) Committee was established to address the issue of inverted duty structure in major sectors and undertake GST rate rationalization. This includes correcting the inverted duty structure to simplify the rate structure, reduce classification-related disputes, and enhance GST revenues. The GoM on Rate Rationalization was also tasked with reviewing instances of the inverted

duty structure, aside from those already addressed by the Council, and recommending suitable rates to minimize instances of refunds due to the inverted duty structure.

GST rate rationalisation

Presently, 18% GST is applicable on premiums paid towards health and life insurance policies. It is expected that the GoM constituted in the 54th Council meeting to review the tax rates on insurance premiums will submit its report in the 55th Council meeting for discussion on eliminating the 18% rate on term insurance plans and health insurance policies, particularly for senior citizens and coverage plans up to INR 5 lakh. It is expected that GoM will strike a balance between exemption, reduction in rates and estimated revenue loss. A reduction in GST rate on health and life insurance is going to make insurance more affordable and accessible for the general public, particularly when penetration of insurance in India is just 1%, compared to the global average of 4%.

Further, there have been lot speculations going on with respect to a new GST rate of 35% for specific goods such as aerated drinks, tobacco, cigarettes and related products. The proposed structure ensures that essential goods remain affordable, while luxury items and demerit goods like tobacco and alcohol are taxed at higher rate. This approach aligns taxation with social policy goals.

However, the CBIC on December 3, 2024 has clarified that GoM constituted on GST rate rationalisation has not yet submitted its recommendations to the GST Council. Therefore, speculations related to change in GST rates and new slab rates of 35% is totally false and pre-mature. Thus, what remains to be seen is whether the GST Council is going to give a definitive timeline towards correction of inverted duty rate structures and provide much needed relief for the masses owing to high GST rates on goods of mass consumption that have a direct impact on affordability of such goods within the public at large.

Taxability of Food Delivery Charges

In the recent past, the Directorate General of GST Intelligence (DGGI) had issued notices to major food delivery companies alleging huge GST liability on delivery charges collected from customers. Post which, the fitment committee was assigned the task of determining taxability of food delivery charges in relation to food ordered online through food delivery apps such as Zomato, Swiggy etc. It is expected that its recommendations will be placed for discussion in the next GST Council meeting. This is

important since this will provide the much-needed clarity on the Council's stand regarding taxability on food delivery charges and GST registration threshold for delivery partners which will definitely help resolution of the tussle between the revenue and this sector.

Inclusion of Petroleum Products

Presently, products (petroleum crude, high-speed diesel, motor spirit, aviation turbine fuel, natural gas, and alcoholic liquor for human consumption) are outside the ambit of GST despite numerous representations made by this sector. Further recently, extra neutral alcohol has also been brought outside the purview of GST. Out of these, it is expected that discussion will at least include ATF and natural gas under the purview of GST.

This has been a focal point before every GST Council meeting since petroleum and oil companies are advocating for including ATF (Aviation Turbine fuel) and natural gas under GST. By bringing ATF under GST, airline companies will take ITC (input tax credit) on the purchase of ATF and gas companies, city gas distribution networks, and industrial user companies will avail themselves of the ITC of the GST applicable on the procurement of natural gas, which will lead to potentially lowering their operational costs and increasing price efficiency. The Central Government is positive about its discussions with the State Governments about bringing natural Gas and ATF under the purview of GST. Achieving this goal would help make the concept of 'one nation, one tax' closer to reality. The decisions and recommendations from the 55th GST Council meeting will be closely watched, given their potential to impact taxation, trade, and the overall financial landscape in India. Reforms in areas such as insurance premiums and GST rates could provide much-needed clarity and relief to businesses and consumers alike. As the Council deliberates on these critical issues, the outcomes will play a crucial role in shaping the future of GST in India, aiming to create a more streamlined and efficient tax system.

Reference: https://legal.economictimes.indiatimes.com/news/law-policy/upcoming-55th-gst-council-meeting-to-address-gst-on-insurance-premiums/115420049

LIST OF EVENTS -2024-25

NATIONAL AND INTERNATIONAL- EXHIBITIONS & CONFERENCES				
SNo.	**Name of the Fairs**	**Country**	**City**	**Date/Month**
1	Garknit-X	India	Kolkata	20th -22nd Dec'2024
2	ISPO	Germany	Munich	3-5th Dec'2024
3	International Yarn and Fabric Show	Bangladesh	Dhaka	11-14th Dec'2024
4	International Conference STRUTEX Czech Republic	Czech Republic	Czech Republic	2nd Dec'2024
5	Tex Premium	United Kingdom	London	17-18th Dec'2024
6	Life cycle Assessment Submmit (LCAS-2025): Paving the way forward to sustainability in Technical Textiles Sasmira, Worli. Mumbai	India	Mumbai	9th-10th Jan'2025
7	Fibre and Yarn Expo	India	Mumbai	23rd-25th Jan'2025
8	INTEXT Expo	India	Ludhiana	31th Jan-3rd Feb'2025
9	International Conference on Functional Textiles and Clothing	India	New Delhi	7-9th Feb'2025
10	Screen Print India Expo	India	Mumbai	13-15th Feb'2025
11	Gartex Tex Process	India	Mumbai	13-15th Feb'2025
12	Gartex Tex Process Mumbai-2025	India	Mumbai	22-24th May'2025
13	INDEX Plus	India	Mumbai	30-1st May'2025
14	Print Expo	India	Chennai	10-12th July'2025
15	Textyle-expo	Algeria	Algiers	21-23 April'25
16	Advanced Textiles Association (ATA) Tent Conference 2025	United States	Jefferson St Louisville	7 - 9 Jan' 2025
17	Bharat Tex	India	New Delhi	14-17 Feb'2025
18	Heimtextil 2025	Germany	Germany	14-17 Jan'2025
19	GTTES 2025	India	Mumbai	21st to 23rd Feb'25
20	Carpet and Floor Expo	Turkey	Istanbul	7-10th Jan'2025
21	GTB- Garment Technology	Bangladesh	Dhaka	9-12th Jan'2025
22	TEX-STIL	Denmark	Vejle	11-13th Jan'2025
23	Barcelona Textile Expo	Spain	Barcelona	14-16th Jan'2025
24	Belwide Cotton Conferences	United States	New Orleans	14-16th Jan'2025

SASMA MEMBERSHIP PRIVILEGES

ADVERTISEMENT TARIFF FOR SASMA Ltd.

Textile Business – E- News Letter

FOR MEMBER **(Amt in Rs)**

	One Issue	Three Issues	Six Issues
FULL PAGE	Rs.10000/-	Rs.25000/-	Rs.45000/-
HALF PAGE	Rs.6000/-	Rs.16000/-	Rs.30000/-

FOR NON-MEMBER **(Amt in Rs)**

	One Issue	Three Issues	Six Issues
FULL PAGE	Rs.12500/-	Rs. 31250/-	Rs. 56250/-
HALF PAGE	Rs.7500/-	Rs.20000/-	Rs.37500/-

BANK INFORMATION

Cheque or Bank transfer through NEFT / RTGS / IMPS favoring Synthetic & Art Silk Mills Association Ltd. Kindly pay by NEFT / RTGS / IMPS to SASMA account. The Bank details are as under: Name of Beneficiary: Synthetic & Art Silk Mills Association Ltd. Bank name: Bank of Baroda, Worli Branch. Account No. 04220100004262 RTGS / NEFT IFSC Code.BARB0WORLIX(Note in IFSC code the 5th character is zero '0') In case of payment by Bank transfer, please email us your payment details.

Margdarshan	Editorial Team	Co-ordination
Chairman: Shri. Mihir R. Mehta	Dr. V.G. Nadiger (Secretary-SASMA)	Mr. Dinesh Karvan (Accountant)
Vice-Chairperson: Smt. Smita A.Yeole	Dr. Ashok Tiwari (Director General)	Sasma_100@rediffmail.com
Address : Sasma, Grd Floor, Sasmira bldg, Sasmira Marg, Worli Mumbai - 400030 Email : sasmaltd@gmail.com Web: www.sasma.in. Tel :- 022-69776030		