

F. N. 16021/05/2019-TUFS  
Government of India  
Ministry of Textiles  
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Udyog Bhawan, New Delhi  
Dated the, 6<sup>th</sup> January 2020

OFFICE MEMORANDUM

Subject: Stakeholder discussion on technology gap in Textile Machinery and way forward

The undersigned is directed to refer to the stakeholder discussion chaired by Hon'ble Minister of Textiles held on 18.12.2019 to discuss technology gap in Textile Machinery and way forward. A copy of the minutes of the meeting is forwarded for information and necessary action.

  
(Anil Kumar K.C)

Under Secretary to the Govt. of India

To,

1. Principal Scientific Advisor to Govt. of India
2. Secretary, Department of Heavy Industry
3. Development Commissioner (Handloom)
4. Development Commissioner (Handicraft)
5. Textile Commissioner, Mumbai
6. Shri Nihar Ranjan Dash, Joint Secretary, M/o Textiles
7. Shri Jogiranjana Panigrahi, Joint Secretary, M/o Textiles
8. Shri Sanjay Sharan, Joint Secretary, M/o Textiles
9. Ms Aditi Das Rout, Trade Advisor. M/o Textile
10. Prof. Ashwini Agrawal, Head Textile Department, IIT Delhi
11. Shri R. Ramanan. Mission Director, Atal Innovation Mission
12. Secretary, Textile Committee, Mumbai
13. Director, Central Manufacturing Technology Institute (CMTI), Bengaluru
14. Director General, Council of Scientific and Industrial Research (CSIR)
15. Confederation of Indian Textile Industry (CITI), New Delhi
16. Textile Machine Manufacturing Association (TMMA), Mumbai
17. Indian Textile Accessories & Machinery Manufacturers' Association (ITAMMA)
18. M/s Arvind Limited
19. M/s Welspun India Limited
20. M/s Shahi Exports
21. The Synthetic & Rayon Textiles Export Promotion Council (SRTEPC)
22. The South India Mills Association (SIMA)
23. Clothing Manufacturers Association of India (CMAI), Mumbai
24. North India Textile Research Association (NITRA)

25. South India Textile Research Association (SITRA)
26. Bombay Textile Research Association (BTRA)
27. The Synthetic and Art Silk Mills' Research Association (SASMIRA)
28. Apparel Export Promotion Council (AEPC)
29. The Cotton Textiles Export Promotion Council (TEXPROCIL)
30. Powerloom Development & Export Promotion Council (PDEXCIL)
31. Dr. Jitendra Sharma. Andhra Med Tech Zone (AMTZ)
32. Dr. Venu, Director, Samviudi, Bangalore

Copy to:

1. PS to HMOT
2. Sr PPS to Secretary (Textiles)
3. PPS to Special Secretary (TUFS)
4. PPS to AS&FA
5. DS (TUFS)



**Stakeholder discussion chaired by Hon'ble Minister of Textiles (HMOT) to discuss technology gap in Textiles Machinery and way forward**

HMOT chaired a meeting with various stakeholders at 1500 hrs on 18.12.2019 in Room No.162, Udyog Bhawan, New Delhi to discuss the technology gap in textile machinery across all value chain in the industry and contemplate a way forward in addressing the issues in a time bound manner. List of the participants is attached at **Annexure-I**.

2. At the outset, HMOT welcomed the participants and expressed happiness that all the stakeholders from textile industry, textile machinery manufacturing industry, R&D institutions and Government have come together to deliberate and find effective solution to address problems of textile machine manufacturing industry in India which is impacting textile industry modernization quite adversely. She expressed confidence that all the stakeholders will work closely in a mission mode to develop and implement strategies in line with Make in India initiative of the Government and significantly reduce dependence on imported textile machinery. HMOT also emphasized that textile sector needs to learn from success stories in other sectors in India so as to replicate such models and achieve speedy growth and enhanced productivity in textile industry.

3.1 Secretary (Textiles) informed that Ministry of Textiles has been striving to modernize and upgrade textile industry through Technology Upgradation Fund Scheme (TUFS) since 1999. Despite incurring expenditure of nearly Rs.30,000 crore during last 20 years towards subsidy payments under the scheme, critical technology gaps exist in entire value chain of textile industry except spinning. Despite spending substantial Government funds, India is heavily dependent on imported machinery across all segments. There has been inadequate in-house R&D in textile machine manufacturing as a result nearly 75-80 percent textile machinery requirement in the country is met through import. The heavy dependency on import of textile machinery adversely impacts the textile industry in terms of cost competitiveness. Hence, strategic shift in our approach is needed to actively promote machine manufacturing in India with ultimate objective of making India a textile machine manufacturing hub and modernizing the entire value chain of the textile industry at par with our competitors at global level. He further stated that the story in manufacture of medical equipment in India was similar to textile machinery manufacture till few years ago, wherein no medical equipment was manufactured except syringes, gloves etc. However, after establishment of India's first ETZ (Enterprise & Technology Zone) in Andhra Pradesh which is known as AP MedTech Zone, sophisticated medical equipment have started being manufactured in India at global standards in short time span of 2-3 years. A similar leapfrog in textile machinery manufacture needs to be attempted with the support and cooperation of all stakeholders to make it a reality by 2024.

4.1 Dr. Jitendar Sharma, Founder- Andhra Pradesh MedTech Zone Limited (AMTZ) & Kalam Institute; Distinguished Senior Fellow- NITI Aayog made a presentation on the successful establishment of AP Med Tech Zone, India's first ETZ (Enterprise & Technology Zone). It was informed that AMTZ is an enterprise under the Government of Andhra Pradesh, a 270 Acre zone, dedicated for Medical Device Manufacturing. The objective behind the project was not only to reduce the cost of manufacturing up to 40% but also to reduce the import dependency. It was informed



that medical devices manufacturing is highly capital intensive and beyond the capacity of many individual units to make such large investments. AMTZ with in-house common facilities and infrastructure has been successful in pooling the best available technologies and helped manufacturers optimize on cost of manufacturing.

4.2 The setting up of AMTZ is on the evidence-based logic, that technology dependent sectors, such as Medical Equipment require several capital-intensive technological facilities, that if provided through government assistance, can substantially reduce the cost of production, improve markets by enabling product certification and link sectors for cross-industry gains. Govt. of India through its various Ministries/Departments such as Dept. of Bio-technology; Dept. of Commerce; Ministry. of Electronics & IT; Dept. of Health Research; Dept. of Pharmaceuticals have contributed by supporting scientific & industrial testing centres. By far this is the largest basket of technology centres developed in any part of the country for industry. This includes 3-D Printing; Electro-magnetic interference, Electro-magnetic compatibility; Electrical Safety, Biomaterial characterization; Accelerated Aging, Biological testing, implant testing, CT Scan tube assembly; MRI Super conducting magnet coil assembly and printed circuit boards assembly. Given that these centres are supported through govt. of India grants for capital needs and operated through public private partnerships, the cost of services in these centres are 10%-15% of global costs of same service, enabling manufacturers to use science to drive economy of scale.

4.3 Supported by Dept. of Bio Technology & Dept. of Health Research, Govt. of India, AMTZ has also put in place Kalam Institute of Technology. KIHT supports technology transfers and serves as technical secretariat for drafting standards for medical equipment for Bureau of Indian Standards (BIS) and GeM (Government e-Marketplace) for enabling transparent public procurement. Dr. Kalam Institute provides the technology banking services that creates the valuable bridge between innovators/research institutions and the manufacturers.

4.4 Department for Promotion of Industry and Internal Trade has set up National Medical Devices Promotion Council with its technical secretariat at AMTZ. NITI Aayog & DBT have also supported medical technology exclusive world class incubators at AMTZ to allow start-ups to get involved with industry projects. WHO has approved a WHO-Prequalification Cell to allow manufacturers to participate in international tenders for programs that are funded under UN assistance and quality becomes a critical qualifying criterion. AMTZ was selected to be the venue of WHO global forum for medical devices in 2018 which was attended by over 1600 delegates from 100+ countries. This was the first time a United Nations Meeting on medical devices was held outside of Geneva, the headquarters of WHO.

4.5 Indian Biomedical Skill Council set up under assistance and technical support of National Skill Development Agency (NSDA) provides for certification of technical human resources in an advanced and fast changing field as Med-Tech. Skill certification being a major non-tariff barrier for markets, when tackled in a structured manner through internationally harmonized skill assessment programs, provided manufacturers with inter-operability of human capital across global manufacturing sites. The patent centre within the campus of AMTZ allows the manufacturers to

harness and protect intellectual property as and when they are developed, giving a virtual life insurance to the product ingenuity.

4.6 Dr Sharma stated that AMTZ model, if adopted by Ministry of Textiles, can improve technology access and manufacturing in textile machinery sector. It would require a textile technology gap analysis to be undertaken, key priorities mapped, and a structured entity put in place to set up and operate a textile technology zone. A DPR will have to be prepared for this project and a multi stakeholder committee put in place to provide further inputs.

5. Textile Machinery Manufacturer's Association (TMMA) made a presentation on the technology gap in textile machinery in the country. Textile Engineering Industry in India consists of more than 3,000 units with a total investment of Rs.9,500 crore and more than 80% of the unit are SMEs. It was stressed by TMMA that huge technological gaps exist in Garment making machinery, Processing machinery, Technical Textiles and Non-woven. Significant technology gaps exist in Weaving, embroidery & knitting machinery etc. The specific technology-wise gaps in various segments as presented by TMMA are given in **Annexure-II**. Citing Gherzi Report, TMMA stated that FDI in textile machinery for capacity expansion and technology upgradation. Joint venture and 100% foreign subsidiary models can be used with effective participation of Textile Engineering Industry (TEI) in India.

6. HMOT was of the view that before taking any further steps it is important to conduct comprehensive gap analysis between the existing technologies in TEI and internationally available technologies and identify sources of such technologies. HMOT appreciated the AMTZ model and its successful implementation in a very short timeframe. She also appreciated the system of banking of technologies and their e-auction adopted by AMTZ.

7. After detailed deliberations and suggestions made by the stakeholders, HMOT directed that a High-Level Committee (HLC) with the involvement of stakeholders may be set up immediately under Additional Secretary with Textiles Commissioner as member and representations from D/o Heavy Industries, Associations of Textile Industry in various segments, Textile Machinery Manufacturers Association (TMMA), TEXPROCIL, SRTEPC, AEPC, PDEXCIL, SIMA, CITI, CMTI etc., and other important stakeholder to identify critical gaps in the entire value chain by conducting gap analysis between the existing technology level in textile machinery manufactured in India and the state-of-the-art technologies being produced and used internationally. The following issues also need to be examined expeditiously by the Divisions concerned in the Ministry for consideration by HLC and making suitable recommendations:

- a) Study AMTZ model for its replication in TEI. AMTZ model can be used for developing Mega Textile Machine Manufacturing Parks to accelerate the pace of development and manufacture of textile machinery in India in line with the objectives of Make in India initiative of the Government.
- b) Suggest framework/strategies for bringing together industry, scientific community and technocrats as part of a national effort to develop critical technologies in a mission mode and address technological gaps TEI and textile industry.





- c) Examine issues relating to taxation, roles and responsibilities of state Governments, possibilities of convergence of efforts from other interventions / schemes of central/state Governments.
- d) Identify countries which could be approached for G2G dialogue for technology transfer/ FDI/joint ventures and other collaborations for bridging technological gaps in TEI and textile industry and promote Make in India.
- e) Identify roles that Textile Research Associations (TRAs) can play in this endeavour. The Committee already constituted for revamping/ up-gradation of TRAs will also report to this High-Level Committee.
- f) Formulate a framework to be adopted for addressing skill requirement to make the workforce adequately acquainted with new technologies being adopted in various segments.
- g) Set up a sub-committee to examine associated technical and scientific aspects for comprehensive determination and analysis of technological gaps and strategy for addressing them appropriately.

8. Dr Venu, Director, Samvrudhi Foundation made a presentation on newly developed handloom which was expected to improve productivity and reduce drudgery. HMOT appreciated the effort but stated that the loom may not qualify as handloom and therefore, some other appropriate term may be used to refer to such leg operated looms. HMOT further directed to explore possibility of inclusion of this loom under new product category and getting legal sanctity to the product before its commercialization. Textiles Commissioner was asked to chalk out a way forward in this regard.

The meeting ended with vote of thanks to the Chair and the participants.

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## Stakeholder discussion on Technology Gap in Textile Machinery

### List of Participants

1. Smt. Smriti Zubin Irani, Hon'ble Minister of Textiles-in chair
2. Shri Ravi Capoor, Secretary, M/o Textiles
3. Shri P. K. Kataria, Special Secretary, M/o Textiles
4. Shri Vijoy Kumar Singh, Addl. Secretary & Financial Advisor, M/o Textile
5. Shri Sanjay Rastogi, DC(Handlooms)
6. Shri Nihar Ranjan Dash, Joint Secretary, M/o Textiles
7. Shri Moloy Chandan Chakraborty, Textile Commissioner, Mumbai
8. Ms. Aditi Das Rout, Trade Advisor, M/o Textiles
9. Shri Ajit B. Chavan, Secretary, Textile Committee, Mumbai
10. Shri A K Panda, Economic Adviser, Deptt. of Heavy Industry
11. Shri Manoj Sinha, Deputy Secretary, M/o Textiles
12. Shri Anil Kumar K.C., Under Secretary, M/o Textiles
13. Prof. Ashwini Agrawal, IIT Delhi
14. Shri K.C. Shakdwipee, O/o DC(HL)
15. Shri Suresh Kumar G., O/o Principal Scientific Adviser
16. Dr. Venu, Executive Director, Samvrudi, Bangalore
17. Dr. Nungsanglemla, Samvrudi, Bangalore
18. Shri O.M. Shah, COA, PDEXCIL
19. Shri Siddhartha Rajagopal, Executive Director, TEXPROCIL
20. Shri K Raju ,Regional Officer, TEXPROCIL
21. Shri Sanjeev Nandwani, SG, AEPC
22. Ms. Chandrima Chatterjee, Advisor, AEPC
23. Shri D.L. Sharma, Deputy Chairman, CITI
24. Dr. K. Selvaraju, Secretary General, SIMA
25. Shri Ravinder Rawat, Deputy Secretary, CITI
26. Shri Ajay Sardana, Corporate Member, CITI
27. Shri Anmol Gupta, Research Associate, CITI
28. Shri D. L. Sharma, Deputy Chairmain, CITI
29. Shri Ashish Aggrawal, Shahi Exports (P) Ltd.
30. Ms. Kanak Israni, Shahi Exports (P) Ltd.
31. Shri M. S Sathishraj, Managing Director, Vaari Textile Machine India Ltd.
32. Shri S.P. Katnauria, Regional Director, SRTEPC
33. Shri Dhiraj Raichand Shah, Vice Chairman, SRTEPC
34. Shri Tanaji I. Kadam, Chief Textile Technologist, BTRA
35. Shri Ravi Prakash Singh, Scientist 'D', SASMIRA
36. Prof. Ashwini Agrawal, IIT Delhi
37. Dr. Hari Om Yadav, Sr. Pr. Scientist, CSIR,
38. Shri Shrikant Gajabi, Sales Director, Savio India Ltd.
39. Shri Vallabh S Thumar, Vice Chairman, TMMA
40. Shri Sachin Kumar Arora Executive Director , TMMA
41. Shri Anil Kumar, Branch Head, TMMA
42. Shri Vivek Arora, TMMA
43. Shri Bachkaniwala, TMMA & HIMSON
44. Dr. Nagahanumaiah, Director, CMTI Bangalore
45. Shri B. R. Mohanraj, Joint Director, CMTI, Bangalore

# Technological Capabilities at a Glance

Advance - B

Group I (At Par with International Standard)		Group II (Marginal Technological Gap Exists)	Group III (Huge Technological Gap Exists)
<b>Ginning</b>		<b>Weaving</b> (Loom Dev. Project ongoing and Proposal under development for R&D under MoT Scheme)	<b>Post Spinning</b> (Auto-coners/ winders, Fancy Doublers)
<b>Spinning</b> (Auto Feeding to be developed)			
<b>Weaving Preparatory</b>		<b>Continuous Processing Range</b> (Tech. Acquisition underway)	<b>Knitting</b> (Flat, Warp & High speed & wider diameter circular knitting)
<b>Processing</b> (Only liquor ratio to be reduced)			
<b>Synthetic Machinery</b> (POY/Staple Manufacturing to be developed – not much demand)		<b>Tech. Textiles</b> (Dip coating)	<b>Technical Textiles &amp; Non Woven</b> (Spec. fibres, Braiding, Needle-punch, Multi-axial looms, Net Knitting, Spunlace, Spunbond and various other machines )
<b>Tech. Textiles- Pack-tech</b>		<b>Embroidery</b> (Indigenous Tech. Developed but to be commercialized )	
<b>Jute Machinery</b> (JV done with a Chinese company, DPR for Jute CEFC Submitted)		<b>Parts, Components &amp; Accessories</b> (CEFC Surat Project ongoing)	
<b>Testing Equipment</b>			<b>Garmenting</b> (Upcoming JVs for cutting range)
<b>Advance R&amp;D Proposed</b>		<b>R&amp;D Proposed/ Ongoing</b>	<b>Import, FDI/ JVs Proposed</b>