Dr Harsh Vardhan, Union Minister for Science and Technology, today announced a breakthrough in scientific processes for the leather sector. The “paradigm shift”, in his words, is the result of efforts by scientists of the Central Leather Research Institute (CLRI), a unit of the Council for Scientific and Industrial Research (CSIR).

A novel, biodegradable dispersing agent developed by CLRI, enables the chrome tanning of leather with just half the normal usage. This ensures the saving of water by 15 million litres per day in the Indian leather sector alone—and an estimated 200 million litres per day if this revolutionary technology is applied globally.

After a visit to CLRI, this morning, he said, “This development is aimed at multiple benefits relating to in-process abatement of effluent problem, curtailing process steps, huge water conservation, time economy and cost saving.”

He also announced that CLRI has succeeded in fostering an “enzymatic intervention” to complete in just 30 minutes the enabled fibre opening process which till now has taken up to 72 hours.

“This is good news for the Prime Minister’s ‘Make in India’ agenda. Our leather and leather goods industry is on the verge of unique competitiveness,” Dr Harsh Vardhan remarked.

Hon’ble Minister released the ‘first copy’ of the MODEUROP Colour Card for the Autumn Winter 16/17 season (eighteen months ahead of the season) in the august presence of Dr M O Garg, Director General, CSIR; Prof Dr A B Mandal, Director, CSIR-CLRI; Dr Sudeep Kumar, Head, PPD, CSIR and Team CSIR-CLRI Shoe Design & Development Centre today.
Dr Harsh Vardhan visited various laboratories in CSIR-CLRI. The laboratories were Centre for Leather Apparels/Accessories and Development (CLAD), EXCEL Lab and Shoe Design and Development Centre (SDDC), etc. He addressed the Scientists and Staff of CSIR-CLRI and applauded their efforts to develop technologies and products in the domain of leather technology.

Dr Harsh Vardhan interacted with the industry. The industrialists present were Shri N Shafeeq Ahmed (MD, SSC Shoes), Shri K R Vijayan (President, Indian Shoe Federation), Shri P Gopalakrishnan (Sellam Chemicals), Shri R Ramesh Kumar (ED, CLE), Shri Atanu Poddar (LANXESS India), Shri J Arun (LANXESS India), Mr Tuncay Deriner (Stahl India) and Mr Gopinath (MV Health Care). He appreciated the efforts of the industry and the partnership they have with CSIR-CLRI. This unique partnership is a testimony of development of leather sector in the country. The sector is increasingly becoming green technology oriented due to the efforts of CSIR-CLRI.

Dr Harsh Vardhan, Union Minister of Science and Technology and Earth Sciences and Vice-President, CSIR while visiting the laboratory closely identified this lab and its achievements with the current agenda of the Government in terms of ‘Make in India’ as well as providing essentials to the common man and to provide high science based technologies to the medium, small and micro enterprises. The services have been provided by the lab to test the various chemicals in waste water, which otherwise the industry cannot afford, were identified as one area where the laboratory has made maximum impact. He also appreciated that the laboratory has helped countries like Ethiopia with their technologies and products and have made an attempt to internationalize it’s out-reach. He emphasized and motivated the scientists to use the combination of natural materials such as pine apple leaf fabric, banana fabric with leather forms, which could lead to the next generation in the fashion industry.

As the Medical Doctor, he was particularly interested in the contribution by the lab in developing of collagen based wound/burn care product.

The Hon’ble Minister was extremely impressed and congratulated the scientists for the success story of an enduring partnership among the trinity of academy, research and industry in leather sector, spun around CLRI over a period of sixty six years. He has also noted that the Institute offers B.Tech., M.Tech. and Ph.D. in leather and footwear sciences through Anna University that could set an example for other sectors to emulate to make the Prime Minister’s National Skill Development Programme for inclusive employment generation.
Hon’ble Minister has also visited M/s India Shoes Pvt Ltd., Chennai and appreciated CSIR-CLRI efforts for providing the end-to-end technology knowledge base to the company over the years. As a result, the India Shoes has emerged as one of the major manufacturers in the country exporting leather shoes and accessories. They are poised to emerge with the help of CSIR-CLRI a front runner to contribute for make-in-India effort.

**About CSIR-CLRI Achievements**

Created just a few months after independence, the Central Leather Research Institute (CLRI) is a unique research laboratory of the Council of Scientific & Industrial Research (CSIR), one of its kinds in the world. Created to provide affordable footwear to our large mass of population, given the fact that our country has the largest cattle population in the world, this Institute has not only developed leather processing technologies and transferred them to the medium and small scale industry but also helped this industry to control the pollution which this industry is known for. Right from inception, the Institute made an initiative with foresight to link technology system with academia and industry. CSIR-CLRI, today, is a central hub in Indian leather sector with the direct role in education, research, training, testing, designing, forecasting, planning, social empowerment. CSIR-CLRI leads in pursuing science and technology relating to leather and delivering desired knowledge base.

CSIR-CLRI has achieved significant milestones in recent years in enhancing the domestic leather sector’s “green image”. These include:

- Providing end of pipe or in-process control measures to ensure eco-benign leather processing for the sustainability of the sector. This has significant strengths in the treatment of waste water emerging from any processing industry, such as leather and textile, chemicals. Through its range of technologies (CAACO, FACCO, FICCO, ENICO), where there is no sludge generation. Treatment cost is in the range of around Rs. 10-30 per m³.

- Water conservation has been a focus area of CLRI’s work. Its scientists have provided techno-enabled solutions to treat solid wastes, whereby value added products emerge, leading to multidimensional benefits on economy, employment and environmental cleanliness.
Composting from leather waste is being explored to ensure economic utilization of wastes for value addition.

Natural fibre based materials from a variety of sources such as pine apple leaf fabric, banana fabric, soya fabric, endi and muga silks have been evaluated for their potential to fabricate consumer products.

Considering India’s diabetes burden, CSIR-CLRI has collaborated with M/s Diabetic Research Centre, Chennai and M/s Novo Nordisk Education Foundation, Bangalore to develop novel diabetic footwear. The technology has successfully been transferred to M/s MV Diabetic Health Care Pvt. Ltd. Chennai. The product is presently being marketed as DIASTEP.

CLRI has built core strength in collagen based wound care products and a range of products has been developed in this direction. Some of these products are already adequately proven in the market. Newer directions in the product range has are being provided by this Institute towards strengthening the product profile. Many of these technologies have been transferred to user industries in India and abroad.

The Institute caters to the significant share of Intellectual properties generated by the global leather sector. The rate of translation of knowledge lead to the user industry is significantly higher than the global average.

Several training programmes of varying focus and duration are conducted for the benefit of a wide range of target groups from leather industry. Alumini of this Institute contributes to around 60% of industry’s manpower employment. Tailor made training programmes are also undertaken depending on the requests received from the industry. Trainings are also offered to operators / technicians / supervisors in CETPs, ETP and tanneries for operation and maintenance of treatment system and chrome recovery system.

Considering the importance of the technological intervention in MSME sector for the overall benefit of the people at the base of Economic pyramid, CSIR-CLRI has launched an innovative initiative by identifying fourteen socially relevant knowledge
leads for possible transfer on ‘as is where is basis’ to potential micro and small scale beneficiaries without any license fee under CSIR 800 scheme.

- The institute has significantly been contributing towards the growth and development of the rural sector by skill upgradation and empowerment of the rural artisans and women workforce. Empowering the SME sector in leather compliant to environmental regulations and requirements and restoring operations in closed tanneries in semi-urban and rural population in Tamil Nadu has led to the saving of 2.5 lakhs jobs.

- Success stories of the Institute on international platform have enhanced the image of the Institute immensely on a global platform. The Institute has served the Govt of Ethiopia by the successful benchmarking programme of the tanneries in Ethiopia. Moreover, it has helped in the capacity building of the Leather Industry Development Institute, Ethiopia on a twinning mode. The programmes have helped the Ethiopian industry to have more capacity as well as export earnings.

- CSIR-CLRI has presently been executing a project to assess the feasibility of establishing a Leather Park in Botswana. A research collaborative project is also underway with Vietnam. The Institute has in fact served many countries including Bangladesh, Nepal, Sudan Kenya, Sri Lanka etc. from time to time to enhance its image further.

- Based on the immense success of the salt free tanning technology, developed by this Institute, in India and abroad, UNIDO, Vienna has come forward to join hands with CSIR-CLRI to establish UNIDO-CLRI Centre for Salt Free Tanning in order to disseminate the technology across the Indian Leather Sector. Based on the outcome, a major initiative will be taken up by UNIDO and CSIR-CLRI for dissemination of the technology at global level.

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