

Prototype of Low-Cost Safety-Suit for Manual Scavengers in India

Authors : Noopur Anand, Amit Gupta

Abstract : Sewage divers are the workers involved in cleaning and maintaining of the sewerage lines by entering through manholes. The working conditions of sewage divers in India are more challenging than in other countries. Though India has legal acts framed to ensure protection of the divers called 'The Prohibition of Employment of Manual Scavengers and their Rehabilitation Act, 2013' by Ministry of Law and Justice but these are usually not implemented. Further, the divers are not even provided with safety gear like mask, eyewear, helmet, safety suit, safety belt, gloves, and shoes because of lack of initiative among the agencies/individuals employing them and low awareness of importance of the protective gear amongst workers themselves. Several reports and studies show that because of the non-availability of safety gear, many sewage workers get infected and many of them retire even before attaining superannuation and about 70% of the manual scavengers die while on job. Though there are neoprene safety suits, costing only a few thousand, available in the market which can suffice but is beyond the buying capacity of the sewage diver and agencies/individuals employing them are reluctant to procure it as they find it expensive. In absence of safety suits, the divers get exposed to the parasites, viruses, and disease-causing germs present in the sewage. The research was undertaken with the objective of developing an affordable safety-suit which would save diver from coming into direct contact with the sewage thus preventing infections and diseases. The low cost of the suit may also motivate their employers to procure them for sewage divers.

Keywords : manhole cleaner, manual scavenger, prototype, low-cost safety-suit

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