

ISO 9000 QUALITY SYSTEM FOR RAW RUBBER AND RUBBER PRODUCTS INDUSTRIES IN SRI LANKA

L M K Tillekeratne

Since 1987, the quality of Raw Rubber and rubber products has been assessed by testing the products standards set by the British Standards Organisation (BS 5750). Instead, now the European Economics commission (EEC) Japan and USA have decided to go for perfection of management at all stages of incoming raw material to the final stage of packaging and storage of end-products which are ready for export called ISO 9000 standardisation. This quality system required documentation and demonstration clearly specified at all levels of production in the form of a quality manual. This quality manual must clearly state what they do in a factory and exactly follow what is stated in the quality manual without even slight deviations in the process. This new system will do away with the export certification carried out by product testing which is in operation all over the world. However, in order to ascertain the quality requirements at all stages of production from raw materials, compounded rubber, finished products and final products ready to be despatched in cartoon form are subjected to various testing procedures. As a result of this assurance of quality of material at each level and perfection of the management practices at all levels, all the end-products are expected to reach the required quality for the product without any rejects.

In Sri Lanka nearly 65% of the total rubber produced is exported in raw form while the balance is used for rubber products manufacture mainly ment for export. Hence, there are two (02) types of factories viz. the raw rubber factories and the rubber products manufacturing factories to gain ISO 9000 registration.

Already some of the dipped rubber product factories and shoe manufacturers have obtained ISO 9000 registration for their factories from either SLSI or, BSI or from DNV of Netherlands and 2 other factories producing rubber products and solid tyres are likely to get their ISO 9000 registration from ISI and from the SLSI in the near future.

There are over 150 latex crepe factories in Sri Lanka producing white latex crepe of very high purity for export purely for the manufacture of food and pharmaceutical rubber appliances. Hence, they are the most important factories to reach this requirement specially with regard to exports to USA, Japan and E.U. countries. Hence, action is being taken to obtain ISO 9000 registration to all these crepe factories shortly. Quality manuals for all these factories taking them as clusters of factories producing some kind of latex crepe (viz FB, UFB etc) have already been

done. Seminars have now been organized to educate the Managers and Assistant Managers of the factories as to how they should proceed with this procedure. Arrangements are being made in all these places, specially at the rubber factory managed by the Rubber Research Institute, to introduce forms to fill with regard to general practices at all levels of crepe manufacture including at the stage of latex collection in the field.

The main items in the quality manuals are -

01. Distribution list.
02. Management responsibility consisting of -
 - a. quality policy
 - b. organization
 - c. organization chart.
03. Quality system
04. Contract review
05. Document control
06. Purchasing
07. Product identification
08. Process control
09. Inspection and testing
10. Inspection of measurements and testing equipment
11. Inspection and test status
12. Control of defective products
13. Corrective action
14. Handling, storage, packaging and delivery
15. Quality records
16. Internal quality audits
17. Training
18. Statistical techniques

The procedure manual consist of -

- a. Procedure for the acceptance of process chemicals, water and rubber etc.
- b. Procedure for the acceptance of raw compressed rubber in liquid and dry form.
- c. Procedure for collection and weighing of latex.
- d. Procedure for transportation of latex.
- e. Procedure for bulking, dilution and fractionation of latex.
- f. Procedure for bleaching and coagulation of latex.
- g. Procedure for the milling of coagulum

- h. Procedure for drying of rubber
- i. Procedure for the blanketing of dry laces to thick crepe.
- j. Procedure for the packaging and storage of thick and thin crepe rubber.

The Rubber Research Institute of Sri Lanka is aiming to get the ISO 9000 registration from the SLSI for all these factories within the next few months.

With regard to RSS manufacture, obtaining the registration is fairly difficult as there are over 200,000 small units producing sheet rubber in the country. However, now arrangements are being made to fulfil this requirement for RSS as well, at least at the point of collection, grading and packing of the commodity. This process may take at least another year to be implemented fully.