A DOCUMENTATION of the QUALITY SYSTEM of a FIRE-EXTINGUISHER MANUFACTURING FIRM

A Special Problem Submitted to the
School of Graduate Studies
in Partial Fulfillment of the Requirements of the Degree of
Master of Engineering



Naomi Cossette R. Luis, ChE Central Philippine University Iloilo City, Philippines March 2001

INTRODUCTION

The Bureau of Product Standards (BPS), which is an attached agency of the Department of Trade and Industry, classifies fire extinguishers as products covered by mandatory standards. Products covered by mandatory standards are those products which, when used, may affect the life, health and property of the consumer. The specifications for products covered by mandatory standards are contained in the series of Philippine National Standards issued by the BPS.

The manufacture and refilling of fire extinguishers is regulated by licensing requirements in accordance with PD 1185, otherwise known as the Fire Code of the Philippines. Considering the importance of its use, a prerequisite requirement for its sale is the issuance of the Philippine Standard (PS) Quality Certification Mark by the Bureau of Product Standards (BPS). The Manufacturers then affix PS mark stickers on the cylinders to show that they have complied with the requirements of the standard.

As the relationship between manufacturers and suppliers transcends national barriers, quality awareness has heightened. The entry of imported goods brought about by trade liberalization has provided consumers with a wide array of products and services to choose from. Customers have become more discerning and have become more particular that they get their money's worth.

In order to enhance the competitiveness of the local manufacturers, the BPS required the manufacturers to align their system to the ISO 9000 standards.

Acknowledged in an increasing number of countries, the ISO 9000 series of standards is perceived as a way to equalize the market inasmuch as systems certified for compliance to the standards achieve equivalent levels of recognition.

The adoption of the standards by local manufacturers pose a number of problems. First, the local companies are usually run as a single proprietorship and the owners cannot afford to spare employees to concentrate on the documentation procedure. Second, although the ISO 9000 have been familiar to industries outside the

province, the local firms have not been exposed to such. Thus, to allow for a smooth transition, they have been initially required to align their system to that of the ISO 9000 series of standards.

STATEMENT OF THE PROBLEM

The fire extinguisher manufacturing process is straightforward and simple and does not require specialized technical knowledge. In most cases, the managers and technicians learn the process by experience. While educational background may not pose a hindrance when manufacturing fire extinguishers, the same causes difficulty when setting up quality systems. For one, English is not the primary language of the users; and the ISO 9000 series of standards is available only in English. Moreover, the author has noted from experience that even people with technical education and experience need enough time to understand the provisions of the ISO 9002 standards.

Local, small-scale firms are not adequately prepared to document their quality systems according to the requirements of the ISO 9002 standards.

PURPOSE

To provide a model by which industries of similar nature may refer to in the preparation of their quality manuals.

SCOPE OF THE STUDY

The study will cover only the documentation of the quality policies adopted by the fire extinguisher manufacturing company based on ISO 9001:1994. The determination of the scope was based on the following factors.

Different firms have their own set of objectives, management practices and processes, and this makes their quality system distinct from the others. The author wishes to avoid the impression that it can be standardized.

The ISO 9002:1994 standards encourage firms to provide their customers and the public with copies of their quality policies as proof of their commitment to quality.

The author has included the related procedures in the appendix. The firm under study uses the same practice in compliance to the requirements of the standard.