

# **A PROSPECTIVE APPROACH ON PRODUCT RESPONSIBILITY**

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**Abstract:** The present study analyses a current and important problem because we are currently experiencing an unseen growth of the volume of production in parallel with its diversification. The introduction in production of the new products is preceded by the preliminary execution of some manually executed prototypes, which is followed by their production on a large industrial scale. Under these circumstances there is the possibility for small errors to appear which can influence the behaviour of the products on consumers. Therefore, the focus of the audit is to follow closely the opinions of the consumers and the faults of some products which were found by consumers in order to remove these products from production.

Due to the fact that this present study analyses in detail the prevention program of the product responsibility, I have also presented some essential common elements for such a program. In order to have an efficient program for the prevention of product responsibility, the following operations are required: organisation, education, new review of product, initial review of products and the seasonal control of production, warranties control, warnings of the contracts, complaints and claims, saving the registrations, revocation plan, subrogation, risk criteria, standards, control of the service, repairs, etc. All these elements are presented according to their individual characteristics and they should allow for a prevention program for product responsibility in other countries. That is why these elements have an important role in the economy of this material and point out once again the theoretical and practical importance of the studied problem.

**JEL Classification: O10, O29, D00, P46**

**Key words: review of products, seasonal control of production, warranties control, complaints and claims, risk criteria, standards, control of the service, repairs**

## **1. Introduction**

The USA trade department has published "A model for the uniformity of the Product Responsibility Act". The model law refers to uniformity which can settle the rate of providing responsibility. Although the act did not pass the USA Congress, it was voluntarily used by many states. Many states have adopted the essence of the act in their trials.

Presently the increasing number of responsibility cases for products is only given to some products like – asbestos, Dalkon shield. The rate of growth of the cases is of 4% a year starting with 1981, if these products were removed. The 4% growth of the responsibility cases is proportional with other civil or personal cases.

## **2. QUALITY PRODUCT RESPONSIBILITY**

The future challenge of the responsibility cases is situated in the field of toxic products like asbestos. The toxic products encounter different obstacles as opposed to other products. These are causing chronic diseases with a long period of recovery, and are different from those causing an immediate accidental prejudice. Generally speaking, many people have been exposed to toxic products and the number of responsibilities threatens the solvency of many medicine or chemical products manufacturers using formulas for similar products. For a manufacturer it is difficult to assess the risk of such a faulty product for a second or third generation. The manufacturer has difficulties in assessing future responsibilities with the purpose of disposing the cost when a product causes damages to many people on a longer period of time. The case of the toxic products is overwhelming for the state and for the federal legal system and can be an impulse for the national compensation system for toxic prejudices.

## **3. THE PRODUCT RESPONSIBILITY LAW IN EUROPEAN COUNTRIES**

The recent example of USA has been followed by the European legislation. American organisations which export in Europe have to be warned because the product responsibility law has been adopted in many European countries.

### **Safety measures.**

The insurance companies are usually paying the initial losses in the case of product responsibility. The product manufacturer has to be protected against the risk of being brought to trial or at least to reduce the risk to a level where he could afford a reasonable profit or a continuous growth. In order to meet this objective, one needs to have a program for the prevention of product responsibility. But in spite of the fact that these programs vary from one corporation to another, there are some common elements for an efficient program.

### **Organisation.**

*In order to have an efficient program for the prevention of product responsibility, one has to set an organisational structure. This structure will be according to the size of the organisation and the aptitudes of the employees. The organisational structure has to state the responsibilities and to have the authority of fulfilling these responsibilities.*

One has to set a special safety commission for the product with a responsible engineer, by applying the safety measures or with an outside consultant as a member. The function of that commission is to coordinate various activities. The members of the commission have to be from the field of design, from the legal field, production, marketing and quality field, as the engineer or any other person from management. Moreover, the manager will:

1. Maintain the relation with the insurance companies and with governmental consultants.
2. Take part in prejudice trials.
3. Maintain an educational program.
4. Coordinate the control program.

5. Act as a consultant in functional areas.
6. Be informed on future trends.

If the organisation does not have a responsible engineer, this has to be selected from within or outside the organisation. The selected person has to:

- Have technical knowledge about the goods to be manufactured;
- Have experience,
- To show professionalism and diplomacy both internally and externally,
- To have access to management,
- To be respected by everyone,
- To be able to launch a project,
- To be a team player.

Once the person has been chosen, all the other persons have to be aware of his role. The potential problems as for example letters of telephone calls from customers, notifications from insurance companies or from lawyer firms, have to be directed to the engineer responsible for the application of the safety measures.

### **Education.**

Education represents the cornerstone of the program. All the employees have to be aware of the importance of the safety of the product. An initial effort of using the available bought materials, training sessions and printed materials can train the staff for the preventive program of product responsibility. New employees, or employees who have been transferred are part of the organisation and they have to be exposed to the same educational effort. They have to know how to deal with the first notifications related to product – incidents and curious telephone calls which can warn against possible incidents.

This form of ongoing education is part of the action plan. Information as for example some changes in law, results of legal trails, data used in control and verification are very important and have to be transmitted to the employees.

### **New review of products.**

New products are probably often brought to trial than the older ones and that is why a new review is needed before they leave the factory. The review is the first and the less expensive chance of the organisation to identify and correlate problems. The safety of the consumer is the most important aspect in the review process: function, cost and selling are on the second place. In other words, the product safety is one of the design parameters. The design and quality control staff have to learn that the products which have been manufactured in inappropriate circumstances were previously considered abusive and the lawyer of the complainer will consider these aspects predictable. (Gîrbovenu, S., Crăciun, L., Meghişan F., Barbu C., 2008)

One has to adopt safe design techniques for a product and one of these techniques are:

1. The failure and the effect of analysis;
2. Free analysis of errors
3. Concepts failure-safety;
4. Analysis tests;
5. Safety symbol for the characteristics of the product;
6. Coded identification.

The description of the product by the designer represents the starting point in the review process. This description includes the use of product, the duration, potential failure, design parameters, utility environment, development tests and the final accepted criterion.

The review team does not have to have preconceived notions in relation to the product. This evaluated the product according to the present industry and the governmental standards in the same way as the laws, the codes and the applied regulations. At the same time one also has to take into account the requirements of the customers and the anticipated end use of the product. Moreover, the team also takes into account any previous prejudices of the product. (Crăciun, L., 2008)

It is almost impossible to design a product without any safety incidents. In these situations, the insecure area is guarded or protected from the exposure to any prejudice. The faults of the product can be designed in some situations to appear in such a manner so they would not cause any prejudice. If they is not possible to project or guard against the risk of prejudice, the faults have to be permanently attached to the product, warnings in words, colours or illustrations.

The tests on customers can predict the wrong uses of the product. The designers test a product in order to notice if it shows the predicted performance when it is used. A test on customers tries to determine what happens when the product is wrongly used. The documentation of the tests has to be carried out in such a manner in order not to create any risks.

#### **4. DESIGN CONTROL IN THE STANDARD ISO 9000**

Due to the minor design and material changes prejudices may appear on an existing product and this requires the same review for all changes. The design control complies with the standard ISO 9000. (Popescu, D., 2007)

##### ***Initial review of production.***

*The first product review is generally based on a manually built prototype. Therefore it is required a previous review of the first production in order to determine any faults which have not been materialized on the prototype. A limited production and a controlled distribution are recommended in order to avoid any hazard. For that limited sample, important information can be obtained from customers while the explosion to the responsibility risk is minimum.*

The review procedure will evaluate the construction plan in order to determine the congruity with:

- The failure and the failure analysis
- The manufacturing and the work procedure
- Production tools
- Used materials
- Test equipments
- Control system
- Sampling plan
- Packing and delivery
- Work instructions
- Safety warnings
- Service information for distributors and dealers

All staff who works in the review process may evaluate the product design for safety reasons. The more people evaluate the safety of a product, the higher is the

probability that the exposure to responsibility will be detected before the product comes on the market. The control process complies with ISO 9000.

### **Seasonal controls of production.**

Most of the organisations carry out seasonal production control in order to verify or validate the efficacy and quality of the control system. This is an ISO 9000 requirement. These controls can be extended in order to evaluate the safety parameters. The control can be carried out on recently manufactured products or products used by the customers for a longer period of time. The inspection and testing of the products is based on a simulation of the activity of the customers. The product inspection and test relies on a simulation of the activity of the customers. The result of the control is sent to the commission for the safety of the product.

### **Control of warranties, warnings and contracts.**

The program of preventing the product responsibility has to check the warranty, the commercial, the contracts of the dealers, the catalogues and technical publications. This review has to include:

1. A verification which has to prove that the terms and conditions of sale are limited to a profitability declaration which means the product is manufactured out of a good material with an adequate workforce. The use of the phrases "secure" and "ensures the safety of operators" should be avoided. If the product is seen as being "safe" and a person is being prejudiced, that person has decided that the product is defective.
2. A legal counsel carrying out an analysis of the copies, advertisements, sales brochures, product promotion literature, technical reports and presentations.
3. An examination of the buying mentality can determine taking any warranty regulation.
4. An analysis of the distribution of dealers and of the franchise contracts in order to determine the management of the faulty items. These contracts are admitted in court and may be an acknowledgement of the fact that the organisation produces faulty products.
5. A verification in order to determine that the words "non-conformity" and "inappropriate unity" were used correspondingly.
6. An evaluation of the warranties costs as for example:
  - Identification and measurement of the significant variables which affect the costs of the warranty.
  - Measuring the costs of the safety of product warranty.
  - Determining the different characteristics of the product.
  - Determining the type of promoted warranty.

### ***Complaints and claims.***

*A complaint or a claim is a communication between the market and the organisation regarding the product performance. This information warns the producer to make a corrective option. A. Pareto considers the complaint analysis can lead to a change in the design of the product which will reduce the exposure to prejudices.*

The investigation of the corporal prejudices or of the damage claims or complaints regarding the product safety has to be initiated quickly. The notification about a claim or complaint is usually sent to a dealer or employee. This is sent to the department responsible for the action. The responsible engineer with the safety measures reviews the situation and determines:

- The cause of the complaint or claim.
- The nature and severity of the prejudice.
- The nature of the failure which caused the situation.
- The age of the defect and if it was there when the product was sold.
- The negligence of the parts.

A preliminary investigation can lead to a solution for the claims or to a preparation of the defence for those claims which may lead to bringing to trial.

The claim and complain procedure has to make a notification for the specialized departments according to the nature of the claim. A plan for the revocation of the product may also be necessary. These corrective actions comply with ISO 9000.

***Keeping registrations.*** *The defence in a product responsibility trial needs the availability of the production design and the registration of sales. There are some special types of registrations which have to be carried out:*

- Product development and tests registration.
- The results of the process and the inspection system.
- Registration of the written and verbal communications with customers, of the materials and claims.
- Date of design.
- Warranty period.
- The acceptance and approval by the governmental agencies, customers and independent testing organization.
- Registrations of accepting raw materials.

Registrations are maintained in such a way so that the material or product could be the sketch of an operator, machines, times, etc.

The registrations have to be protected against losses by stocking them in non-inflammable rooms.

The problem regarding the duration of keeping registrations is based on a series of considerations. The registrations are usually kept for the entire life of the product plus 18 years, in order to cover the time when a minor prejudice can produce a trial.

Other considerations which have to be remembered are:

- The imminent risk of the product,
- The registration need for safety,
- The stocking method.

The method of keeping registration complies with ISO 9000.

***Revocation plan.***

*Although the revocation cost of a product varies significantly according to the type of the product and the involved quantity, the costs are substantial and force more than an organisation to go into bankruptcy. An effective unpredicted plan of revocation helps to reduce the revocation costs and the responsibility risk for the product.*

Once the notification for a defective product is received, the organisation has to decide if it revokes all the products which are suspected to be defective. This decision will be based on three factors:

1. The maximum exposure to personal prejudices or material damages if the product is not revoked. This determination will be based on a script failure, the quantity involved, the severity of the risk and the revocation cost.

2. The communication form (radio, TV, newspaper, telephone and letter) used in contract by the users.
3. It will be determined if the product is repaired or replaced or if the client is indemnified.

If the fault is considered accidental” the commission for the consumer’s protection” forces the manufacturer to act in a specific way. In this case the decision in favour of the manufacturer.

When a revocation is required, it is important to identify those units which have determined the deficiency and to correlate this identification with the suitable registrations from production.

#### ***Subrogation.***

*A part of the prevention program for the product responsibility involves raw materials, component parts and suppliers. The same elements for the evaluation of the safety criteria which are applicable to the buyer are also applicable to the supplier. A visit to the factory of the supplier is required and also a prevention program. The supplier has to visit the factory of the buyer in order to evaluate the safety of exposing the product to raw materials, components or subassemblies.*

All communications between supplier and buyers regarding the deficient raw materials, the components and the subassemblies are done in written form. The buyer provides the supplier with all information about the product safety as well as complaints, warranties and reviews. The review of the buy is a ISO 9000 requirement.

#### **Risk criteria.**

If an organisation produces a series of products, it usually has a series of potential losses of the responsibilities for products. Some products have a higher rate of risk than others and that is why the products are evaluated according to safe and individual risk criteria. This technique allows the organisation to exert a preventive effort on the required products. ”the failure and the analysis of failure” is a starting point where the value of the Dollar can be evaluated.

#### **Standards.**

All the preventive programs, especially those belonging to large corporations have to involve the employees in developing the design and the quality standards. Due to the fact that the manufacturer bears the risk due to the unreal standards, their employees have to be involved in professional groups which develop the standards. At the same time, the management of the organisations has to be informed about the law of responsibility towards products. (Popescu, D., 2008)

#### **Control.**

The seasonal controls of the prevention program are essential in order to determine if a program is satisfying from an operational point of view. These controls are mostly controls of the system which operate in the same way as the quality control. The seasonal controls are useful tools to measure the progress and to promote the reverse connection in order to improve the prevention program. The results of the control comply with ISO 9000.

### **Service.**

The customer service can have a large influence on the effectiveness of the prevention program. Having more friends than enemies reduces substantially the possibility of a trial. The customer service has to report the observations regarding the way in which the product was used or if it was wrongly used. At the same time, if a repair is required, this has to comply with the same requirements as the initial production. (Scrioștenu, A., 2009)

### **Repair.**

The customers will usually accept failure, if there is a repair which requires:

- An insurance policy which meets the requirements of the customer;
- The availability of the information regarding the repair procedure;
- Repair facilities which provide an accurate service for a fair price.

## **5. CONCLUSIONS**

Organisations can improve the loyalty of the customers by offering an efficient repair policy.

Resources are limited and therefore the perfect product cannot be realised in many cases. The customers have to pay for certain processes on a long term.

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