

**SAFE SURVEYING INTERNATIONAL CONFERENCE**  
**Genoa, April 27<sup>th</sup> 2001**

***PLANNING AND  
MANAGEMENT OF SAFETY  
FOR MARITIME WORKERS ON BOARD SHIPS  
AND IN PORT AREAS***

Antonio Moccaldi  
Director  
ISPESL

## **PLANNING AND MANAGEMENT OF SAFETY FOR MARITIME WORKERS ON BOARD SHIPS AND IN PORT AREAS**

Antonio Moccaldi

### **Introduction**

There exist numerous regulations regarding the subject of work safety in the maritime port sector and in navigation, and in particular relating to specific problems regarding such shipyard activities as the building, maintenance, repair and transformation of ships. In fact, it is possible to find an article of law covering the necessary protection activities for workers involved in every type of operation. The same holds for activities connected with navigation. Both regulations relating to safety and hygiene in work places, and those issued internationally referring specifically to navigation (SOLAS Convention and the International Code of Safety for High Speed) represent a valid reference point for guaranteeing the safety and health of staff on board.

Past experience has demonstrated that the capillary nature of legal provisions isn't always sufficient to avoid serious accidents: as an example, just think of the collective accident which occurred during work on the ship Elena Montanari in Ravenna in 1987. In this case, bad safety management was the cause of a pernicious and unpredictable event, notwithstanding the existence of sufficiently protective regulations in favour of workers.

### **Importance of the relationship between regulations and controls**

It is useful to recall that the above incident spurred on the search for appropriate activities which would favour the co-ordination of vigilance and control coordination methods. The cause of the catastrophe lay not so much in the inadequacy of the prevention regulations but rather in the absence of an integrated safety system for the implementation of regulations and of appropriate vigilance by relevant bodies. On this subject, ISPESL drew up a proposal for an Inter-ministerial Decree which would define precisely the sphere pertaining to each of the relevant bodies within an integrated safety system. This document didn't amend in-force regulations, but rather tended to underline the various control and vigilance responsibilities in order to avoid both the risk of omissions and that of overlapping by the authorities involved.

Currently, the European Directive 391, put into effect with the Law Decree 626 of 1994 and its subsequent amendments in the Law Decree 242 of 1996, clarifies employers' and employees' responsibilities and indicates, in the document on risk valuation, the instrument needed to attain the objective of "safety" in work places.

### **Instruments for safety planning. The document on risk valuation.**

It is no easy matter in the case of work in shipyards and during sea navigation, to compile a document on risk valuation as it has to take account of a wide and very varied range of activities. These include activities carried out on scaffoldings from fixed or movable building sites, load movement operations, activities carried out in narrow and/or confined spaces, and furthermore, in particular, of dangerous operations such as sanding, welding, painting, insulating, asbestos proofing, work with vibrating tools, work on plates (straightening and plastering), cleaning, etc. All these aspects of their work expose workers to chemical, physical and biological agents from which, depending on the level of exposure, serious industrial diseases may occur.

Substantial literature exists on this matter which documents the industrial diseases that can be attributed to working in shipyards, due to exposure to asbestos, lead, aluminium, benzene and organic solvents in general, ethylene glycol and epoxy paint, mercury vapour, as well as exposure to vibrations and noise. To the above we can also add the risks connected with navigation. With regard to the latter, furthermore, it must be emphasised that ships can be considered both as places of work and as living quarters, as workers often live on ships for long periods of time. We can conclude, therefore, that a ship in transit is basically comparable to a promiscuous microcosm as far as living and working are concerned. Within this microcosm, it can be difficult to isolate work operations, to limit them in terms of space and time, in order to avoid uncontrolled exposure of the crew members not directly involved in risky operations.

### **The Risk Management Manual and recent regulation amendments: Law 485/1998 and subsequent decrees.**

In virtue of the complexity of the sector and of the various meanings which the concept of "work environment" can take on in the contexts outlined above, in 1998 Ordinary Law n. 485 of Parliament delegated to the Government the task of *issuing one or more law decrees aimed at adapting the in-force laws on the safety and health of workers to the particular needs of services carried out both on national maritime means of transport and on those destined to fishing, as well as to services carried out in ports. These include operations of maintenance, repair and transformation of ships in ports. These decrees are to be consistent with the Law Decree 626 of 1994, modified by the Law Decree 242 of 1996 (Art. 1).*

As a result, in July 1999 two law decrees were issued. Decree n. 271 relates to *the adaptation of in-force regulations on the safety and health of workers in the work place to the particular needs of services carried out on ships* (Art. 1, subsection 1). Decree n. 272 relates to *the adaptation of in-force regulations on the safety and health of workers in the work place to the particular needs of operations*

*and services carried out in ports, including operations of maintenance, repair and transformation of ships in ports (Chap. I, Art.1, subsection 1).*

Without going into the content of each of these Decrees in great detail, it is worth quoting the following innovative and significant concepts introduced by them.

As far as the Law Decree n. 271 is concerned, it is worth emphasising how the regulatory adaptations invest ship-owners with all the typical responsibilities of employers. He/she has the obligation to provide the safety-at-work plan, which must be integrated and updated every time alterations and transformations on board occur. The second party to take on an important role in prevention activities is the captain of the ship. He, together with the ship-owner, is invested with all the responsibilities concerning the organisation of the prevention on board system. He must appoint the members of the Prevention and Protection Service and the authorized doctor. He must issue procedures and instructions for the crew (provisions provided for by the navigation code relative to hygiene, health and safety at work remaining valid) and notify the ship-owner, after consultation with the SPP, of whatever may be lacking or not in the weaknesses and anomalies found on board the ship.

In particular, a yearly meeting to be held on board the ship, in order to coordinate the activities of the captain, the safety manager and the safety representative, will be useful to the SPP. At these meetings, hygiene and safety measures, the appropriateness of individual protection instruments required on board, the information and training programs for maritime workers provided for by ship-owners and any variations from the normal activity conditions of the ship unit will be updated and adapted. The minutes of every meeting remain at the disposal of the vigilance and inspection bodies.

Article 11, Law Decree 271 furthermore defines the duration of work on board a ship and the rest schedules programmes for maritime workers. Everyone can see how this matter is of fundamental importance given the promiscuous nature of the working and living environment referred to above.

An interesting innovative element is introduced in Law Decree 271. This is the concept of safety "MANAGEMENT" based on the production of an "ad hoc" manual. The concept is mediated by the international safety management code for ships (ISM Code) of the Solas Convention. Article 17 of this Decree establishes that, on board the ship, there must be *a management Manual for safe work environments on board*, in which *the instruments and the procedures used by the ship-owner to adapt to the provisions set out in the Decree and to international regulations* are reported.

Furthermore, Law Decree 271 with the intent to define the specific roles of the vigilance bodies and to co-ordinate their operations established: *a permanent technical Committee whose duty is to examine particular problems arising when applying national and international regulations in terms of the safety and health of maritime workers* and *a Territorial Committee for the prevention of accidents and the promotion of work safety and hygiene on board*. The permanent technical

Committee is set up within the permanent consulting Committee for the prevention of accidents and the promotion of hygiene at work as at Article 26 of Law Decree 626 of 1994. The duty of the Territorial Committee is to carry out initial, occasional and periodical visits as set out in Articles 18, 19, 20 and 21 of Law Decree 271, in order to ensure that the provisions contained in the said Decree are being applied. The activity of ensuring the correct application of regulations regarding the protection of health and safety at work on board ships, is the responsibility of maritime Authorities, local health Unit Companies and of the maritime health Offices, as set out in Article 3, subsection 1, letter (i) of the same Decree. The duty of verifying the documentation on the safety plan drafted by the ship-owner remains the responsibility of the Territorial Committee. The purpose of this verification is the issue, by the Ministry for transport and navigation, of the certificate of safety in the work environment on board, which testifies the compliance with the conditions for the work environment required by Law Decree 271.

The structure and contents of Law Decree 271 represent the precise desire on behalf of the legislator to identify the individual people involved in the question of prevention, starting from the ship-owner and including the vigilance Bodies and the relevant Committees, and to outline their respective roles and responsibilities. Law Decree 272, instead, analyses in greater depth the aspects relating to *provisions regarding port operations and services* in general and, in particular, *maintenance, repair and transformation operations* as well as *provisions concerning of verifications at sea of new constructions and of great naval transformation operations*.

To all intents and purposes, the contents are mainly technical and are aimed at bringing individual port operations back into specific physical work areas. Therefore, both the technical characteristics of places, whether these are open or closed, and the methods of operations carried out therein are described in detail. In this context, the employer becomes responsible for the proper execution of work and all operations required. In the case of maintenance, repair and transformation work, if carried out by more than one company, instead, the ship-owner or captain is required to appoint the leading company commissioned for the work, the owner of which will nominate the technical manager for work on board the ship and draft the safety document.

The contents of Law Decree 272 represent, therefore, a point of reference for those who have to draft a Risk Management Manual. In fact, from Decree 272 one can extract relevant information on the methods of individual operations, collected and organised in such a way as to create an extensive case history of possible situations.

Regulations on the subject of the protection of workers, therefore, evolve and adapt themselves to changing situations. Law Decree 626 of 1994, the first example of a new way of thinking and dealing with the issues of safety and hygiene in the work place, has introduced the matter of risk evaluation. Even though this concept is fundamental to the prevention process, it appears to be insufficient if unaccompanied by an

appropriate risk management system. Law Decrees 271 and 272 of 1999 put into practice a cultural approach to be followed in the future together with ever more regulatory instruments and, in particular, with the implementation of the scientific and research know-how necessary for improved management manuals.