

THE ACTIVITY VIEWPOINT AND THE LIMITS OF THE HEALTH, SAFETY AND ENVIRONMENT (HSE) PROGRAM IN THE BRAZILIAN OFFSHORE OIL INDUSTRY

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The article analyzes some of the critical aspects of the setting up of the Health, Safety and Environment (HSE) program adopted by the main companies in the petroleum region known as the Campos Basin, located in the north of the state of Rio de Janeiro, the biggest oil basin in Brazil. The theoretical and methodological reference used is based on the tools of Ergonomics of Activity and Psychodynamics of Work with an ergological perspective. We detected a conflict between the achievement of production targets and the application of the safety procedures during operations.

Health and safety trainee, EWA and offshore oil industry, complex social-technical systems

1 Introduction

The choice of offshore activities as the priority empirical field was based on the following reasoning: (1) it opens up space for investigating the risk of extended accidents (Machado et al. 2000; Woolfson et al. 1996; Perrow 1984; Paté-Cornell 1993; Llory 1996); (2) it allows a fruitful approach to the collective dimension of work (Ferreira and Iguti 1996; Figueiredo and Athayde 2004; Pavard and Decortis 1994); (3) it involves the study of subcontracting plant and services in the oil industry, with its numerous types of outsourcing. (Druck 1999; Figueiredo et al. 2004). This article is one of the results of the “Work, health and safety in the Campos Basin offshore oil industry” project, developed by the Innovation, Knowledge and Work Studies Nucleus (Neict/UFF) in partnership with the North Fluminense Petroleum Workers Union (Sindipetro-NF), based in Macaé (RJ), and supported by the Rio de Janeiro State Research Support Foundation (Faperj). The above mentioned project is intended to analyze the general conditions under which the work of the oil workers in the Campos Basin is carried out and its relations with health and safety (Machado et al. 2000). In this document, we intend to show that the adoption of a multidisciplinary reference could contribute to the emergence of different viewpoints concerning the organization of platform and offshore drilling work, comparing the occupational health and safety situation in these environments with recent investments made by companies in the sector. To do this, we incorporate into our reference the contributions of ergonomic work analysis (EWA), emphasizing the activity viewpoint, which is in our opinion crucial in thinking of more extensive and long-lasting training in health, environment

and safety, over and above proposals involving brief training courses incapable of resulting in the effective engagement of the workers.

This study was motivated by the increasing number of accidents involving the biggest oil company in Brazil, despite increasing investments that have been made in HSE (Health, Safety and Environment – SMS portuguese reference) (Freitas et al. 2001). This context was given greater international exposure after the accident on platform P 36, resulting in 11 deaths, and the listing of platform P 34. In the three years prior to the accident on the P 36, there were a total of 93 deaths among company staff and contract workers.

2 Approaches and methods

The theoretical and methodological reference used to orient the research, providing the context for this article, is based on the tools of Ergonomics of Activity (Wisner 1994; Daniellou, 1996) the Psychodynamics of Work (Dejours 1993; Dejours 2004) and the Activity and Work Resources Clinic (Clot and Faita 2000), with an ergological perspective (Schwartz 2000). Incorporating the ergological perspective is aimed at exploring what the preceding approaches offer as a possibility for combining, or “weaving together” as Schwartz prefers, the scientific disciplines and the knowledge originating from the activity.

The methodological contributions made by such approaches help to get closer to the real work and, consequently, the conflict between the instructions and what is actual work (Alvarez and Telles 2004). This is accomplished mainly through the participation of workers in the discussions, benefiting from their experience accumulated over the years, their know-how and the attributes associated with that portion of knowledge that emerges during the activity.

We worked mobilizing an “extended research community” (Athayde et al. 2003) involving “direct researchers” (the first two authors), the “union group” (commissioning party) and a “group of directly concerned workers” (contacted through the union administration), in addition to an “indirect researcher” (the third author), who kept track of the research without systematic participation in the field investigation. This perspective favored the comparison and development of the viewpoints of the authors involved.

The survey was carried out and the data produced using the following sources with related procedures:

- *primary sources:*

- a) direct observation – visit to Petrobras platform P 47; open interviews with workers on 2 visits to the departure and arrivals lounges at the Macaé and Campos airports (RJ);
- b) joint union / university activities – researcher participation as observers at four union meetings; organization of a discussion meeting between Sindipetro-NF, University of Provence (France) and Fluminense Federal University held at the latter, entitled “Ergonomics, Ergology and Worlds of Work”;
- c) interviews - (13) individual interviews with technicians of different specialties, with the HR manager for the region, with the director of HSE of Sindipetro NF, and with the works doctor and attorney who provide services for the same union;
- d) (20) workshops and discussion groups to analyze the work (October 2002 to December 2004) each lasting on average 2 hours 30 minutes, recorded on cassette tape, at the union’s head office in Macaé (RJ). In the period 2002-2003, the participants were

members of the union administration on the Petrobras payroll (10 to 25 years service). In the period 2003-2004, the groups consisted of oil workers from outsourced companies, laid off due to accidents that occurred (5 to 20 years service). The themes discussed followed a prepared agenda prioritizing questions linked to the work of these professionals. On some occasions, audiovisual material was also used. Emphasis was laid on valuing dialog, talking, and elements relevant to meaning or interpretation that the persons involved give to the work situation.

Using the methods described, we explored here one of the themes discussed: the conflict between the achievement of production targets and the application of safety procedures in the operations. To illustrate the discussion, priority was given to training in the Health, Safety and Environment (HSE) Program, set up by the biggest company operating in the region and described below, selecting some extracts from the reports of the discussion workshops.

3 Discussion: HSE and the work on the platforms

In 1996, the Petrobras Exploration and Production (E&P) section organized an integrated system for the management of its processes, oriented around operational safety, environmental protection and occupational health, based on international standards BS 8800, ISO 14001 and the ISM CODE. In 2000, all the platforms in the Campos Basin were certificated and soon after, the entire section, with the inclusion of Petrobras Operational Units in 2002.

The occurrence of the latest accidents involving the company was one of the factors that led Petrobras to restructure the occupational health and safety system and the consequent creation of the HSE corporate body.

A business area named “services” was created, responsible for defining Petrobras corporate policy on HSE. The other areas and business units must adhere to these policies at departmental level.

True to the standards on which it is based, the foundation of the Petrobras HSE Management System is the PDCA cycle (*Plan, Do, Check and Act*). The use of this cycle as a guide is aimed at contributing to the objective of continuous improvement proposed by the organization.

3.1 Implementation, economics aspects, HSE and performance incentive policies

The way in which the Petrobras HSE system is implemented is the subject of a lot of discussion among employees, unions and contract workers, and generates conflicting opinions regarding the benefits of the system. According to some employees, the program was set up incorrectly. In the Campos Basin, the program was set up using multipliers from various technical areas in the company, not including health, safety and environment, who were trained for three days in the concepts of the HSE program. The employees interviewed considered the training period insufficient to allow assimilation of the knowledge and communication to colleagues.

Advances in matters of Health, Safety and Environment can be explained not just by the fact that the company is effectively attentive to such questions, but also by the need to capture the resources, loans and financing that guarantee its activities.

The lines of credit available on the international market favor “green” companies that are preoccupied with ecological issues. In this way, despite the voluntary nature of environmental certification, companies seek this pathway since it is a determining factor

in the competitiveness of Brazilian products and services on the world market (Sevá Filho 2000).

It is also evident that the consequences of such an attitude are aggravated if we add to it the reports of those responsible for inspecting and releasing platforms for operational activities. These reports point to the existence of “pressure” on the part of platform supervisors so that HSE procedures are not carried out, since they take “a lot of time” to be completed and can “delay” the work. Another aspect mentioned is that there is a lot of resistance to bureaucracy at sea, due to the urgency and practicality associated with offshore work.

Thus, according to the reports, an employee who insists on complying with the standards required by the company’s HSE policy is pejoratively called “corporate” (Figueiredo et al. 2004).

Other reports point to the non-adoption of standards and the need to break production records. The new organizational configuration of Petrobras encourages the policy of offering premiums in the form of bonuses to reward those units whose performance is within the parameters stipulated. What sometimes happens is that, because of this, stoppages for important maintenance operations are postponed so as to avoid loss of profits and prejudicing the unit. On these occasions, HSE practices are not taken into consideration. In addition to this, accidents are not notified. This under-notification has been one of the main causes of variations in accident figures recorded and the non-acquisition of this data by the agencies responsible in the most widely varying sectors. In the Campos Basin, many workers draw attention to the under-notification of accidents that occur owing to the company’s performance incentive policy. From the reports it was possible to confirm that the management performance assessment, the incentive bonus and achieving production targets are factors that are out of line with compliance with safety procedures during operations. In the assessment, if the importance attributed to safety takes second place, in ongoing management attitudes emphasis is placed on production to the detriment of accident prevention. These, however, are not the only factors that make it difficult to effectively set up the HSE program, as we shall see.

3.2 The under-notification of accidents and carelessness in the issuing of Work Permits (WP): obstacles to the setting up of the HSE program

The Work Permit (WT – PT, Portuguese reference) informs workers of the risks they are exposed to in emergency situations, before the work is carried out.

An outsourced employee describes an accident he suffered, where, in addition to under-notification, there was no WP for carrying out the operation:

“Three people work on the drilling deck [drilling activity]. When one leaves, there are two to pull the wedge [80 kg]. In my case, two went off and I was on my own pulling the wedge and the driller said: ‘The works got to be done’. I carried on pulling on my own. Then, since the wedge was very heavy, I said: ‘Look, I can’t take this’. He said: ‘One of them’s coming’. I felt a pull in my spine. A pull so strong, that I was all dislocated. I said: ‘I can’t do this any more’. I left hopping from one leg to the other with so much pain, and went to the infirmary. I should have gone ashore, but they didn’t take me. When I came from there, I asked: ‘Give me any kind of authorization’. [refers to the Notification of on-the-job Accident – CAT, portuguese reference]. ‘No, we here can’t give you any authorization at all’. I arrived at the base and went to the doctor. I had three slipped disks. Then they put me on sickness benefit.”

The use of the work permit (WP) is, in many cases, in conflict with the actual production. The report of a Safety Technician describes a type of procedure that cannot be carried out due to the non-compliance with certain items in the safety standards, and, as a result of this, the employee did not sign the Work Permission. The result of this was that the manager assumed the risk for the activities because of the cost of a stoppage, which is around fifty thousand dollars per day.

4 Conclusions: guidelines for proposals for change

Organizational restructuring and the adoption of HSE practices as an option for combating recurrent problems highlight the fact that questions of health, safety and the environment are merely supporting actors in a scenario that ceaselessly seeks record production levels and increased profits. In addition, the setting up of the HSE program does not guarantee the actual compliance of the workers. This failure is attributed to inadequate planning, that has chosen as the main multipliers, with inadequate preparation, persons from areas not linked to health and safety, and the sidelining of the potential contribution originating from the experience of workers in the creation and setting up of the program. This experience has been built up over the years to generate knowledge that goes beyond the content of the manuals.

The setting up of the program gradually, allowing the recognition of its actual importance and, mainly, disseminating effective compliance with its practices could have been the primary objectives. This approach facilitates the training of committed multipliers.

It can also be seen that, even after the adoption of the HSE program, the workers' viewpoint continues to be relegated to a background position. One example of this is the prohibition, by the company, of worker participation on committees investigating the main accidents, something that in some cases can be overruled by obtaining a judicial preliminary order. The proposed reformulation includes a revision not only of the mechanisms for establishing targets, but also of the steps taken to make the targets set compatible with the application of HSE tasks in day-to-day work.

Under-notification is related to non-compliance with instructions and to incompatibility between the work stipulated and the work actually done, since the procedures followed are not those found in the company's HSE Programs. Performance incentives that assess the manager and team according to the number of accidents occurring on platforms have not proved efficient, since where accidents occur, professionals opt for non-notification so as to avoid losing points. A form of assessment should be found, whereby the under-notification of data is rendered impossible. To do this, it is necessary to provide more inspection, both on the part of the company, and the union and public agency responsible. In addition, the reports indicate that safety professionals on platforms are subordinate to the platform manager (GEPLAT). A return to the hierarchical situation previously in force is therefore recommended, where these professionals reported directly to the company's central safety team, and therefore had more autonomy to record accidents.

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