

A simple model of Safety Culture

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Abstract

This paper sets out to present a Simple Model of Safety Culture (SMoSC). The model is simple, as the title indicates, and does not attempt to provide a comprehensive, detailed description of safety culture. The goal for the model is to provide safety specialists with a tool that allows them to tackle issues and problems coherently, and address identified weaknesses systematically. The usability of the model is illustrated with examples from the offshore petroleum industry and from railway transportation.

Introduction

Since its origin in the initial International Atomic Energy Agency's (IAEA, 1986) report on the Chernobyl disaster, the concept of safety culture has frequently been described as a significant root cause in many accidents. Despite such importance safety culture has generally been ill defined and few agree on what it actually constitutes. Reason (1997, p.191) stated: "*Few phrases occur more frequently in discussions about hazardous technologies than safety culture. Few things are sought after and yet so little understood.*"

Risk managers and nuclear safety specialists (INSAG, 1991; HSC, 1993), engineers (Carnino & Weimann, 1995), industrialists (CBI, 1990) and psychologists (Cooper, 1998; Reason, 1997) have attempted to define and make the concept of safety culture operational, but the lack of an empirically supported definition has been evident in the various descriptions. This has not prevented the use of the concept, in fact, safety culture has been included in official safety management documentation e.g. the Norwegian Petroleum Directorate's Framework Regulations, section 11 (2001, p.7), specifies that: "*The party responsible shall encourage and promote sound health, environment and safety culture...*"

Part of the problem with making safety culture operational has been the strength of the engineering approach dominant in many industries. Although attitudes and behaviours are included in most definitions, the engineering approach focuses primarily on the safety management system. Rationality and optimal behaviours are used to assess probable risks levels and operational personnel's inability to follow the prescribed rules or regulations are rarely included or considered relevant (Guldenmund et al. 1988 cited in Hale, 2000; Rollenhagen, 2003). The engineering approach is often described by operational personnel as a way for management to cover their backs. If an accident happens, the blame can be placed on the person