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Basic Characteristics of Work Safety in China

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Abstract

This paper describes current work safety status in China and analyzes main features of it from socioeconomic viewpoint. Rapid economic speed has certain negative effect on work safety, much high proportion of industry such as mining, manufacturing and construction in national economy reflects high social risks, and low level of industrial workers, especially peasant workers increases human error risks and make it urgent and necessary to build a scientific and suitable education system to enhance work safety training. Different regions show obvious difference both in work safety and socioeconomic development, regional fatality rate in industrial accidents would decline with rise of regional economic income. Forceful work safety policies and measures made by the Government since 2002 have put the tendency toward higher frequency of accidents under effective control.

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1. Introduction

Work safety is essential for a country to keep social stability and to develop national economy in a healthy way. Work safety status among different countries or in different stages of a country diversifies with social and economic development [1-3]. The developed countries have better work safety situation than those of developing countries. According to “the five-stage work safety theory” [4], medium stage of industrialization is known as “accident-apt-occur” period, both number of accidents and fatalities increase rapidly. Today China is at medium stage of industrialization and undergoing a historical and profound society transition during which China is turning into a modern society with socialism marketing economy system from an ethic traditional country with planned economy system. Those changes in economy, politics, culture and social life may inevitably influence work safety in China and make it present special

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characteristics. Therefore, this paper explored basic features, regularity and tendency of work safety in China by comparison analysis on work safety, social and economic development indexes such as GDP, three industrial proportions, labor force structure and regional economy. This study explored a new method to build a long-term system for work safety management so as to realize harmonious development of work safety, economy and society.

2. Methods

The data about work safety used by the study chiefly comes from China work safety yearbook (1999-2009) [5] compiled by SAWS. According to the Work Safety Law of PRC, work safety departments at all levels in China are responsible for summarizing the statistics of accidents occurring in their respective jurisdiction and reporting the same figures to the superior level along the line. One of responsibility of SAWS is to collect and analyze statistics of all accidents throughout the country each year and publicizing the results on a timely basis. With the statistics, we are able to identify the distribution of accident causes, deaths and injuries involved in the accidents, and the trend of accidents in China. In order to analyze relationship between industrial accidents and social and economic development, we have used some data from China statistics yearbook (1985 - 2010) [6] compiled by State Statistic Bureau of China. Data about coalmining comes from China Coal Industry Yearbooks [7].

Adopting comparative analysis as the key method, we have used line and column figures to show the changes of work accident-related data as time passes by or as result of regional differences, and discussed the causes of these changes.

3. Analysis of overall situation

According to statistics of SAWS, China's work accidents deaths kept declining yearly from 1994 to 2000. However, an obvious upward trend occurred from 2000 to 2003. Incidents and death tolls of work accidents kept a downward trend since 2003, as shown in Fig.1. Shown in Fig.2, work accidents mainly occur in such high-risk industries as coalmining, metal and non-metal mining. Thereinto, mining, construction and manufacturing are leading the deaths toll in various kinds of industries. Take the year 2010 as example: the deaths of coalmining alone numbered 2433, accounting for over 22.9% of the total deaths of all industrial accidents.

As the most important energy in China, coal plays an important role in economic development, but the coal industry also saw the most severe and frequent accidents, which has greatly harmed the normal production of the coal industry. As shown in Fig.3, in the coalmine accidents, the coalmine ceiling collapse accident is most serious. The incidences and death tolls of ceiling accidents are higher than those of such accidents as gas, machinery, electricity, transportation, flood, and fire.

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