



YOUR RELIABLE PARTNERS



Jointly Creating a Bright Future for
Pakistan's Mining Sector



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PART 01

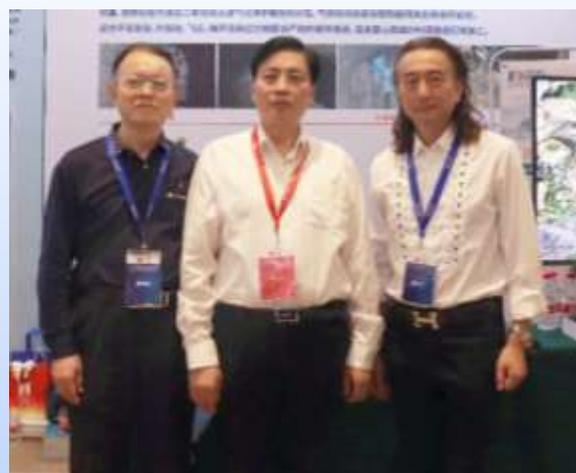
Achievements

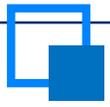
in China



Collaborating Partners

I Fang Ying: Expert in gas expansion and rock fracturing, inventor, leading figure in China's gas phase transformation industry, senior engineer, member of the National Pneumatics Standardization Committee, Chairman of Shenzhen Kaiqiangli Technology Co., Ltd., holds more than 40 personal invention patents, has participated in the formulation of eleven Chinese industry standards, has published more than a dozen papers in Chinese and international blasting magazines, and has been the leader of several major national scientific research projects.





A Legacy of Innovation in China: Mr. Fang Ying's Achievements



New technology

The difference with chemical blaster and advantages:

1

No Blast Waves

2

No Shock Waves

3

No Vibration Wave

4

No Thermal Energy

5

safer and more economical

(1) Intelligent filling machine



(2) Dewar jar



(3) Flexible cracker



(4) Infusion Tube



The technology is totally different with traditional chemical blaster.
(More case will show in later.)

FRAG BLAST | 13

13th International Symposium on Rock Fragmentation by Blasting

Wang Xuguang Editor

October 17-19 2022 | Hangzhou, China

 Metallurgical Industry Press



2023-12-29 发布 2024-07-01 实施
中华人民共和国工业和信息化部 发布

Research on key technology of new air energy expansion blasting

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ABSTRACT

In order to solve the problems of high cost and low efficiency of static blasting and mechanical rock breaking, as well as the management of carbon dioxide expansion blasting accidents by the competent department, the author studied the key technology of new type air energy expansion blasting, and achieved phased results. The research results are mainly in three aspects. Firstly, the structure of the expansion blasting cracker is optimized and tested, and the structure and composition of the air energy gas expansion cracker are described. Secondly, the gas which can be expanded by phase change filled into the cracking device is studied and tested, and the equipment scheme with liquid oxygen as the main component and liquid nitrogen as the auxiliary component is determined. Thirdly, after more than one year's "design-test-improvement" research, a new type of air energy expansion blasting cracker and the matching intelligent gas filling equipment have been successfully developed, and a set of scientific methods for safe construction operation on site have been explored. According to the field application research, the new air energy expansion blasting method has the outstanding advantages of low construction cost, safe operation, high rock breaking efficiency, and small damage caused by blasting vibration.

1 INTRODUCTION

At present, the general rock breaking methods mainly include explosive blasting, hydraulic hammer impact, static expansion agent expansion and cracking, etc. Among these methods, explosive blasting has the advantages of low construction cost and high rock breaking efficiency, and is widely used in rock breaking construction such as mining, mine construction and urban construction. However, when the rock-breaking operation is restricted by the surrounding environment, such as the distance between the blasting operation area and the sensitive target (building, tunnel, building, structure, etc.) cannot meet the requirements of national laws, regulations and technical standards, the blasting operation cannot be approved by the management department, and for construction still can only adopt the hydraulic hammer percussion method and the static expansion agent expansion method

method for rock-breaking construction. In order to improve the rock-breaking efficiency, in recent years, the technology of rock breaking by expanding carbon dioxide gas has attracted people's attention, research and preliminary application (Jin et al., 2021; Liu and Cheng, 2017; Sun et al., 2017; Du et al., 2016; Ding et al., 2016). Because the expansion of carbon dioxide gas requires the use of evaporation tubes and fracturing tubes, the problem in the construction site remains explosive dangerous chemicals, and the processing cost of fracturing tube is relatively high, which leads to the relatively high construction cost of carbon dioxide expansion rock breaking method, so it is limited to some extent. In order to find a rock-breaking method that can not only improve the rock-breaking efficiency but also reduce the rock-breaking cost, but also does not involve the use of hazardous substances, based on the research of carbon dioxide hole



2023-11-08 发布 2024-03-01 实施

团体标准

T/CWTCIA 10001-2023

水下岩石破碎施工技术规程

Standard Procedure of Underwater-Rock-breaking Methodology

2023-11-08 发布

2024-03-01 实施

中国水运建设行业协会 发布



PART 02

Collaboration with Other Countries



In Saudi Arabia, we obtained approval from Royal Commission to extensively utilize the New Technology near Mecca



Collaboration with other Muslim Countries





PART 03

Why Choose

Pakistan?



Pakistan is endowed with abundant mineral resources, which hold great potential for economic growth and development. However, the mining sector in Pakistan has long faced challenges that have hindered its full-scale development. These challenges primarily stem from relatively backward mining technologies and low mining efficiency, coupled with the high costs of mining equipment. As a result, the mining industry has struggled to achieve large-scale development, and this has led to a situation where foreign investors are often deterred from entering the market.

This conference, seeks to address these critical challenges. Enhanced extraction techniques, improved resource management, and cost-effective solutions can unlock the full potential of the country's mineral wealth, making it an attractive destination for global investment.



The application of this new mining technology will have multiple positive impacts on Pakistan:

1. With the introduction of new technologies, mining and engineering construction will see a significant increase in output and a faster pace of progress.
2. The introduction of new technology will significantly increase in mineral production, thereby generating export revenue.
3. The introduction of new technologies has also led to the promotion of upstream and downstream industries, such as the widespread use of the technology, equipment, paper manufacturing, and liquid oxygen consumables.
4. It will cultivate a greater number of skilled technical workers and will work anywhere in the world.
5. It will promote the upgrading of the industrial chain, including the preliminary and advanced processing of minerals.
6. It will facilitate the innovation of local regulations and standards related to explosives in Pakistan.
7. It will reduce the risk of hazardous chemical explosives falling into the hands of motivated individuals.

In summary, this technology will comprehensively enhance Pakistan's economic and social benefits.

PART 04

Plans & Benefits for
Pakistan





Purpose of Collaboration



Investment & Localization

1. Build factories in Pakistan to achieve product localization and technology transfer.
 2. Collaborate with Pakistani universities for Technical professionals development.
- Promote the improvement of the skills of workers, and thereby enhance the value of Pakistani technical workers.

Economic impact & Social Responsibility

Collaborate with the government to expand the promotion of equipment and technology, enhancing the efficiency of domestic mineral production, increasing investors' expectations for minerals, boosting mineral transactions, and augmenting national tax revenue and foreign exchange earnings while promoting employment.



Long-Term Partnership

1. Jointed invest with local partners for the mining developing .
2. Facilitate trade and investment exchanges, Promote the landing of more ore rough processing and precision processing enterprises, gradually promoting the upgrading of the domestic ore industry.



PART 05

Support from
Government of Pakistan







YOUR RELIABLE PARTNERS



THANKS



China-Pakistan
dostzindabad