

Accidents in Coal Mining in Colonial Assam: A Study of Makum Coalfields

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Abstract

The modern mechanized coal mining industry, which developed in Europe in the 19th century, increased the extraction of coal in the industrial age. This increased extraction witnessed numerous accidents leading to the deaths of miners in the underground mines. It developed and shaped new legislations related to mining and labour bringing significant changes to the industry. Coal mining in colonial India witnessed exploitation of the poor peasants brought to work in the mines. The mines in general were located in remote areas and the pathetic life of the miners remained hidden from the gaze of the mainstream society for a long time. Coal mining began in Assam towards the end of the 19th century when organised mining operations began in the Makum coalfields of present day Tinsukia district. The mine labours had to adopt the new way of life in the underground mines where deaths and accidents was a frequent affair. Mining regulations though introduced had limited effect especially until the first quarter of the 20th century. This paper tried to understand the history of the accidents in the coalmines of colonial Assam with especial reference to the Makum coalfields. The paper discusses the measures taken by the colonial regime to regulate, inspect and report on the workings of the underground mines vis-a-vis the high rate of mine accidents recorded.

Introduction

The Margherita and Ledo region of Tinsukia district of Upper Assam are known for the coal industry owned by the North Eastern Coalfields of Coal India Limited. Coal mining began here in the late 19th century when coal was discovered by European geologists working for the Geological Survey of India. To extract coal from the region European venture formed the Assam Railway and Trading Company Limited and were subsequently granted the lease of coal mining in the region, which they called as the Makum coalfields. Presently the industry has an important role in the economy of the region. The industry both directly and indirectly has helped in providing livelihood to the local communities. At the same time, it also has drastic impacts on the environment of the region especially after the introduction of open cast mining from the 1980s. Illegal rat hole mining has further disrupted the environment. These illegal mines have

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led to several accidents in the recent years leading to the death of poor mineworkers. In September 2022, two coal miners died in a gas explosion inside an illegal mine. Most of these accidents take place because the illegal mines undermine safety protocols, putting the miner's lives at risk with the sole intension of making profits. Accidents in coal mining in Assam in recent years have become a subject of discussion and debate due to its relation with rat hole mining banned by the National Green Tribunal in 2014. However, such mining operations have continued and are often in news due to accidents, causing deaths of the miners. Recently in January 2025, an accident which led to the death of four miners in an rat hole mine in Umrangso, Dima Hasao has again brought the debate of stopping such mining practices in the region. As one looks back into the history of coal mining in the region one finds that mining accidents were frequently in the Makum coalfields due to the unsafe mining practices by untrained miners. The colonial records show high rate of mine accidents in the Makum coalfields from the late 19th century to the end of the 1920s. Most of these accidents were because of neglecting safety mechanism in the underground mines and lack of proper training of the miners.

Coal mining is a risky and perilous industry due to the large number of deaths due to workplace accidents and occupational diseases. Scholars have noted the natural element in mining where one has to work underground against the natural geological settings that make the mining job much riskier. However, the rate of accidents was always high due to unsafe mining practices undertaken globally which increased the risk of accidents. The demand for coal and the subsequent mining practices resulted in a large number of deaths occurring in the coalmines. Catherine Mill in the context of the British coal industry stated that due to the emergence of mechanized industry in the late 18th and 19th centuries, the workers faced new challenges relating to industrial health among which the mining industry was the most oppressive.³ The industry by its nature has to deal with the hazards of working underground in the presence of poisonous gases, unstable structures, and poor ventilation with the lack of proper lighting. These problems led to changes in the mining industry in the form of legislation, recruitment and working procedures bringing significant changes to the industry and in the life of the mine labourers. In the 18th and 19th century, Britain witnessed expansion in the mining industry with the rising demand of coal and other minerals because of rapid industrialization. In the coal sector, increased extraction of coal by deep mining fulfilled the growing demand for coal. This created new problems for the miners in matters related to safety, as they had to work in extremely hostile and dangerous situations. The labourers engaged in the mines also increased in the period thus increasing the numbers of human lives who were at risk. Mills writes that the average life expectancy of a British coal miner in the mid-19th century was only 29 years.⁴ Until 1850s state regulations for labour in the coalmining sector focussed on removing women and children from hazardous workplaces. The mine labourers themselves were responsible for their own safety in the mines. First legislation relating to inspections and safety in the coalmines was enacted in under the Coal Mines Inspection Act. In 1855, a code for safe working in the mines and punishments for any violence was enacted.⁵

³ Mills, Catherine (2010), *Regulating Health and Safety in the British Mining Industries, 1800-1914 UK*, Ashgate, 1.

⁴ *ibid*

⁵ *ibid*

Records on history of mining did not cover the history of safety and accidents in the mines with a historical perspective initially. Until the 1980s, history of mine accidents was discussed only in terms of their causes. Michael Farrenkopf stated that it was only in the 1980s that Helmuth Trischler of Germany and John Benson of Britain argued about the lack of research in the history of deaths that occurred in the process of mining. Trischler stressed the study of the impacts made by the mine accidents on the industrial economy and employment rather than just focusing on the causes of the accidents. He also emphasized exploring the consequences of those changes. Benson on the other hand argued that the British coal industry in the 18th and early 19th century worked for safety almost in relation to the number of fatal accidents only.⁶ In the context of India Dhiraj Kumar Nite in the book, 'Coal Nations: Histories Ecologies and Politics of Coal in India', writes that low wages of the miners were responsible for a large number of accidents and other health problems. It was because the labourers used to extract the easily available coal, which often endangered their lives.⁷

The coalfields of Makum were the easternmost coalfields of British India situated in the province of Assam. Assam passed into the hands of the British India Company in the year 1826 and the 19th century saw the colonial penetration and the exploitation of its resources. After the discovery of tea, the Europeans felt the necessity for sourcing locally available coal at a cheaper rate, which would help sustain the fuel required for tea industry. The coal exploration was carried throughout the 19th century; in the first half of the century, the British military officials on various political engagements in eastern Assam discovered coal in various places in the downhill slopes of the Patkai range. In the second half of the century, the Geological Survey of India completed systematic surveys in the region especially in the Makum belt and considered the Makum coalfields as a site where coal could be extracted profitably. This possibility led to the formation of the Assam Railway and Trading Company, which began coal mining in the Makum coalfields from the year 1882. The coalfields of Makum in the late 19th and early 20th century found a mention in colonial documents for its infamy of high fatality rates among the mine labourers due to the working conditions in the mines. The accidents in the coalmines in India were recorded in various inspection reports, which provide the causes and circumstances of the accident.

Recruitment of Labour and the Making of a Coal Miner

After the grant of leases to the Assam Railway and Trading Company, it engaged the local Naga people to clear the surrounding forests. However, they could not engage the Nagas for digging the mines or working on the underground.⁸ For this reason, they had to bring labourers from outside the province to work in the coalmines. Procurement of

⁶ Berger, Stefen & Alexander, Peter (2020), *Making Sense of Mining History: Themes and Agendas*, Routledge, New York, 193 – 194.

⁷ Nite, Dhiraj Kumar (2014), "Slaughter Mining and the 'Yielding Collier': The Politics of Safety in the Jharlia Coal Fields" in *The Coal Nation: Histories Ecologies and Politics of Coal in India*, Kuntala Lahiri Dutt (ed.), Ashgate Publishing Limited, Surrey England, pp. 105-128.

⁸ Report on the Inspection of the Coal Mines Belonging to the Assam Railways and Trading Company Limited, Assam, 1899.

labour did not pose a problem as the tea gardens of Assam were recruiting indentured labours especially from the regions of eastern and central India. The labourers brought to work in the coalmines in the initial periods belonged to regions of Chota Nagpur, Bengal, United Provinces and Central Provinces. Few of the labourers included people from the North Western Frontier Provinces. Most of the labourers belonged to the Orang, Munda and Santhal communities.⁹ From the year 1911, Nepalese were brought to work in the collieries¹⁰ and by the end of the decade they were the major labour force operating in the mines. The Nepalese mine labourers were sourced from either Nepal through the Gorakhpur depot or from among those Nepalese settled in Assam.¹¹ Along with them, a small numbers of Chinese labourers were brought to work in the collieries.¹² Some of the labour force had also come on their own to work in the collieries. During and after the First World War, some prisoners of war were made to work in the collieries of Makum.¹³

The mining industry required skilled labour. The new coal industry in India recruited the peasants to work in the mines. These agricultural workers aquired the skill for extraction from underground coal reserves with all the risks involved. The labourers brought to Assam did not have prior knowledge or the skill required for working in a colliery. G.W. Gwathrop in his book *“The Story of the Assam Railway and Trading Company, 1881- 1951”* noted-

*“As the mining required from them was unlike anything they had seen or done before, it was soon found out that to introduce the South Staffordshire method of getting thick coal in India, it would be better at once to begin at the beginning, and train up to the work young Indians who had never seen a coal mine, under selected thick coal miners. This was done, and there are now (1895) hundreds of Indians working in the mines, careful and good workmen, who were agriculturalists a few years ago.”*¹⁴

Dhiraj Kumar Nite writes that the “the industry (coal) relied on a handicraft or artisanal form of production, i.e. employment of predominantly human labour power and archaic ways of mining. As mining practices advanced, a new generation of better-informed young colliers appeared armed with safety-related wisdom.”¹⁵ The miners in general

⁹ ibid.

¹⁰ Report of the Chief Inspector of Mines In India for the year ending 31st December 1911, Accessed from <https://dspace.gipe.ac.in/xmlui/handle/10973/22032>.

¹¹ Gurung, Tejimala (2003), “Human Movement and the Colonial State: The Nepalis of Northeast India under the British Empire” in *The Nepalis in Northeast India- A Community in Search of Indian Identity*, A.C. Sinha and T.B. Subba (eds.), New Delhi, M.L. Gidwani, Indus Publishing Company, New Delhi, 172-183.

¹² Report of the Chief Inspector of Mines In India for the year ending 31st December 1911, Accessed from <https://dspace.gipe.ac.in/xmlui/handle/10973/22032>.

¹³ Sen, Sanjay (2014). Coal mining industry in Assam: A study of Tinsukia district 1865- 1940 (Ph.D thesis, Assam University, 42.

¹⁴ Gawthrop, W.R. (1951), *The Story of the Assam Railways and Trading Company Limited 1881-1951*, Harley Pub. Co., London. 28

¹⁵ Nite, Dhiraj Kumar (2014), “Slaughter Mining and the ‘Yielding Collier’: The Politics of Safety in the Jharia Coal Fields” in *The Coal Nation: Histories Ecologies and Politics of Coal in India*, Kuntala Lahiri Dutt (ed.), Ashgate Publishing Limited, Surrey England, 108

learnt the new art of mining from the senior labourers and the European supervisors. Dhiraj Kumar Nite argues that the Indian mines followed a trial-and-error method in the absence of proper training. The precautions that the miners took were limited to prevent the accidents in the mines. Most of the accidents in the Makum coalfields were because of the company's negligence and the responsibility to provide proper training and information on all the hazards, which a miner may overcome while working in the mines. This highlighted the management's unserious attitude towards the life of the miners. The Inspectors of Mines for India himself remarked in 1929 that the Makum Coal field had the worst natural condition among all the coalmines in India.¹⁶ The early miners who came to work had to face those challenges without any proper support and help from the company.

Description of the Mines of Makum in the Late 19th Century

The higher up officials in the Makum coalfields consisted of the manager, the assistant manager, the foreman and the engine wright who were mostly Europeans. The foreman made daily underground inspections and supervised the mining work. The colliery machinery was under the charge of the engine wright. Around six to twenty nine labourers were placed under a experienced senior miner who was known as the *sirdar*. At the groundlevel, the *sirdar* had to ensure that the underground workspace had safety measures in place. The entrance to the mines was from the side of the hills. Timber used to protect the roof. The coal was brought to the surface from mines in trams pulled by ponies. Few mines also had a holding engine to pull the trams. To keep the underground mines lighted, candles, kerosene oil tin *battis* and safety lamps were used. This lighting was not enough for illuminating the underground space and often caused the underground accidents. The timber required in the underground mines and for constructing rail tracks and bridges was obtained from the nearby forests. In the collieries and forests, men folk were engaged to extract the coal and timber, women were employed to carry the coal brought to the surface and children who were more than ten years old employed in other works in the mines overground.¹⁷

Accidents in the Coal Mines of Makum

From the late 19th century when coal mining was started by the Assam Railway and Trading Company Limited, death rate due to diseases and accidents were high enough to gain the attention and concern of the provincial government. In December 1898, the Inspector of Mines for India, James Grundy, made an inspection to the coalfields of Makum. The inspections were carried at the request of the Chief Commissioner of Assam, Henry Cotton, who was informed by the Deputy Commissioner of Lakhimpur about the causalities in the coalmines of Ledo and Tikak. Henry Cotton received reports of mining accidents from the police stations and acknowledged the seriousness of the situation. He observed that it was, "desirable that the mines should be inspected

¹⁶ Annual Report Of The Chief Inspector Of Mines In India For The Year Ending 31st December 1929, Retrieved from- <https://dspace.gipe.ac.in/xmlui/handle/10973/22014>.

¹⁷ Report on the Inspection of the Coal Mines Belonging to the Assam Railways and Trading Company Limited, Assam, 1899.

by an expert with a view to ascertaining whether the fatalities have been due to any want of proper care, and of suggesting any additional precautions which may appear to be required.”¹⁸ In December 1898, inspections were arranged for the coalmines, and Inspector of Mines for India, James Grundy inspected these coalmines. The inspections were made for three consecutive years- 1896, 1897, 1898 on all the 5 working mines of Makum coalfields viz. Ledo Valley East, Ledo Valley West, Upper Ledo, Tikak and Namdang coal mine.

Grundy in his inspections found that in three years 37 miners died in the mines. Among the fatalities, 12 were women miners who worked overground in the coalmines. The causes of the accidents were fall of coal and timber, suffocation, explosions inside the mines and collisions by trams and tubs.¹⁹ Grundy noted in his inspection report about the negligence of the mining company to provide safe working conditions and to frame safety regulations in the coalmines where the accidents took place. The mine labourers were mostly former peasants who were brought from eastern and central India and from the North Western Frontier Province. Grundy noted that in most of the cases the mining company did not provide training and skill to the miners and this proved to be fatal. He found the miners ignorance responsible for the accidents and most of the accidents happened due to miners burried under heaps of coal that crumbled in during mining and as many as eighteen (18) deaths out of a total of thirtyseven (37) deaths were caused by this. He found that in the coal fields of Makum very little action was taken to support and ensure the safety of the roofs and side walls of the mines when coal was extracted. In the absence of proper lighting the workers hit upon the unsupported roofs thus causing accidents. The inspections carried out by Grundy reflected the sheer negligence on the part of the coal companies and failure to ensure safety in the mines. Reflecting on an accident that occurred in the year 1896 at Upper Ledo mine, when a miner was doused by fire upon entering the mine with a burning lamp inside the fenced area, Grundy noted the callousness of the coal company for not laying down any safety rules in respect of entry of a miner inside a restricted area holding a burning lamp/candle for lighting up the area and without the knowledge of the foreman²⁰. He noted:, “The rule is that all dangers should be removed, and all dangerous places made safe as soon as possible, no matter whether persons have to go to work at the place or not.”²¹ The miners of the Makum coalfields who had liitle or no experience of mining were left to work in the coal mines with very little training or skill. In the coal mines of Makum a new miner introduced to mining work had no other option but to learn the process of mining from the other labourers. The new miners were put to work at less dangerous places at first and once they became accustomed with the mining work underground, they were put under a experienced miner and had to work under his guidance. The workings in the Indian coalfields were mostly pre industrial in nature. Most of the coalmine labourers were primarily agriculturist. According to Dhiraj Kumar Nite, the miners of India generally followed a trial and error method, which caused the accidents and these

¹⁸ *ibid.*

¹⁹ *ibid.*

²⁰ *ibid.*

²¹ *ibid.*

mining approaches at best were “misadventure, ignorance, negligence or foolishness.”²² Grundy found that the coal company was not providing adequate information to the miners who had little or no idea of mining and the possible details of the risks involved in the process of mining, in other word the Company carefully withheld the information on hard and harsh conditions in which the miners had to work. Dhiraj Kumar Nite observed that the production in the Indian coal industry was artisanal in nature where the labourers worked at the collieries in an unsafe manner. He mentioned –

*“The lack of constant, efficient expert safety supervision was an expression of both the colliers’ dependence on the mining sirdar and his employees responsible for accident control, and reliance on the collier’s practical skills of production and protection, which were regarded as more cost effective than any investment in training.”*²³

Due to the insufficiency and inefficiency of the supervising staffs, the mineworkers under the *sirdar* continued work in the colliery with full autonomy. Meanwhile to regulate the mining industry of India and to develop safer working conditions the absence of mining legislation was deemed necessary by the colonial government in India by the end of the 19th century. In 1890 Lord Cross, the Secretary of State for India proposed for inspections and regulation of the mining operations in India.²⁴ It led to the appointment of James Grundy who became the first Inspector of Mines in India in the year 1893. He began working with the Geological Survey of India (GSI) and conducted a series of inspections in most of the major mines of India. Based on his experiences from the inspection to various mines, he laid down suggestions to enact rules for the opening of mines, controlling accidents, minimum age of the miners and matters related to the safety and supervision of the mines. In 1895, Government of India constituted a committee to formulate general rules for the mining operations, which finally resulted in the enactment of the Indian Mines Regulation Act of 1901. The act defined ‘mine’ as a place where any excavation of minerals deeper than 20 feet below the level of the adjacent ground. The government was also empowered to establish mining boards, which would deal with mining legislations.²⁵ By thic act, the mines in India were divided into two inspection circles. The coalfields of Makum were placed in circle II and G.F. Adams was appointed as the Chief Inspector of Mines.²⁶ The coalmines under the supervision of Adams were larger compared to coalmines under Circle II. Adams was advised not to make systematic inspections of the mines of Assam, Burma and Baluchistan The reason behind this exclusion was that the mining industries in those provinces were not fully developed and occasional tours of inspection, by the Chief

²² Nite, Dhiraj Kumar (2014), “Slaughter Mining and the ‘Yielding Collier’: The Politics of Safety in the Jharia Coal Fields” in *The Coal Nation: Histories Ecologies and Politics of Coal in India*, Kuntala Lahiri Dutt (ed.), Ashgate Publishing Limited, Surrey England, 110

²³ *ibid*

²⁴ “Report of The Committee for Review and Restructuring of the Functions of Indian Bureau of Mines,” Retrieved from- <https://ibm.gov.in/?c=pages&m=index&id=366>

²⁵ *ibid*.

²⁶ “Arrangements for the Inspection of Mines under the Indian Mines Act, 1901,” Proceedings of revenue for the year July 1903, ASA Library, 1903.

Inspector of Mines or the Circle Inspector would be sufficient. The Chief Inspector of mines found that the records maintained in the mines of Assam and Baluchistan were ill maintained with frequent accidents and hence this necessitated systemic inspections. In 1902, the Chief Inspector of mines proposed the government for conducting, quarterly inspection of the mines of Assam. However, the proposal did not obtain approval from the government for conducting such frequent inspections. In lieu, government approved inspections to be carried out twice a year. It also directed the Chief Inspector to check and make arrangements so that the inspections of Assam collieries did not interfere with other mines. Regular inspections of the coalfields of Makum started from 1904-05.²⁷

Although legislations were made but there were no improvements in the Makum coalfields especially in the first two decades of the 20th century. The yearly inspection reports recorded that during the period 1905 and 1920 there were more than 250 serious accidents. The report noted that about 130 accidents were fatal eventually causing death of more than 150 coal miners. The death rate was high especially at the beginning of the First World War and in the year 1915 the Makum coalfields witnessed 32 mine accidents.²⁸ The coal company held that lack of technical improvements in the mines, especially the arrangement of good lighting, and detection of inflammable and poisonous gases were the main causes behind the accidents. Some of the accidents were so severe that it led to the deaths of several labourers in one single accident. On 26th of November 1910, four serial underground explosions occurred in the Namdang Coal Mines within ten hours. It led to the death of thirteen persons among whom twelve were mine labourers and one was a European official.²⁹ In the Namdang colliery, *chamber mining* was practiced. After mining was completed in a chamber, it was sealed and separated from the others by constructing a barrier, called *dam*. This was required because the old chamber had splinters to cause fire, which may spread to the rest of the mines. On the morning of that fateful day, the assistant foreman found the area filled with the smell of fire sting, on further investigation he found that smoke filled the air from the old dam causing the fire sting. The dam was repaired but an explosion occurred in the evening, which continued till midnight. The Chief Inspector of mines wrote in his report that the accident could have been prevented if prudence and caution had been exercised. He noted in his report that it was urgent on part of the Assistant Foreman to evacuate the workers to a position of safety after the first explosion. There was negligence of regular inspection of the dam and on being interrogated the Assistant Foreman submitted that the dam remained un inspected since November 23rd, as he was on leave due to illness and his seniors were uninformed about his leave of absence, however no action was recorded against him.³⁰ In 1914 a European Foremen opened the safety lamp without checking for any combustible gases to help a miner to light the fuses of dynamite shots.

²⁷ *ibid.*

²⁸ Report of the Chief Inspector of Mines in India for the year ending 1905, 1906 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1920,' Accessed from- <https://dSPACE.gipe.ac.in/xmlui/>.

²⁹ Report of the Chief Inspector of mines in India for the year ending 31st December 1910, Accessed from- <https://dSPACE.gipe.ac.in/xmlui/handle/10973/22030>.

³⁰ *ibid.*

This caused fire to break out which killed the miner after 6 days of hospitalization.³¹ The Chief Inspector reported that, the practice of opening a safety lamp for firing was an unsafe practice inside a mine and the Assistant Foreman was reprimanded for his negligence.³²

The death rate due to accidents from 1911 to 1920 was more than five per thousand workers. From the 1920s there was a decline in the number of accidents and associated deaths in the coal fields of Makum, between 1921 and 1925 the death rate was reduced to about three per thousand coal miners. In 1925 the death rate was 1.72 which was the lowest ever recorded. The Chief Inspector of Mines in his report accredited the reduction in death rate in kamku Coal Field largely to the efficiency of the staff and technological improvements especially introduction of electrical lights in the underground mines that greatly helped in reducing the underground accidents.³³ New lighting system helped the miners to have clearer visuals as these new facilities could focus with beams of light to a distance of upto 50 feet. Semi portable electric lamps introduced in all the mines of Makum in the year 1933 were powerful enough to lighting 48 candles for a full mining shift. The colliery superintendent was greatly impressed by the development in the lighting system, which provided safer working conditions especially while working in a mining chamber as miners could move through any hindrance with caution and proper inspection of the roofs and sidewalls could be undertaken.³⁴

In 1923, the Mines Act was revised and the Indian Mines Act 1923 came into force on 1st July 1924. In exercise of the powers of section 30 of the Mines Act of 1923, the Indian Coal Mine Regulations was passed in 1926.³⁵ This new regulation empowered the Government of Assam to pass new rules for the coalmines for the province. These rules were intended to address the safety of the coalmine labourers and also check and maintain the health and hygiene in the mining settlements. All the mines were required to provide free drinking water to its employees. It was necessary to provide sufficient supply of water both above and below the mines. Sanitation facilities and sanitary toilets were essential, instructions were laid for provision of the same for the use of the workers, and the mines were to be freed from disposing sanitary wastes for which a sweeper was to be appointed. Adequate arrangements for training people in emergency and transfer of patients in ambulance during emergency were made. It was laid down that a logbook for workers working in the mines had to be maintained with records of their hours of work to ensure safety and security. In underground mines, it is crucial to maintain an accurate count of all people at all times for safety reasons. This involves regular headcount checks, often called *reckoning* or *muster*, to ensure that everyone is accounted especially in emergencies. The Mines Regulation 2023 introduced the

³¹ Report of the Chief Inspector of mines in India for the year ending 31st December 1914, Accessed from <https://dSPACE.gipe.ac.in/xmlui>.

³² *ibid*.

³³ Report of the Chief Inspector of mines in India for the year ending 31st December 1925, Accessed from <https://dSPACE.gipe.ac.in/xmlui>.

³⁴ Report of the Chief Inspector of mines in India for the year ending 31st December 1935, Accessed from <https://dSPACE.gipe.ac.in/xmlui>.

³⁵ The Assam Mines Manual, 1927, ASA Library.

clause for *reckoning* and if any accident occurred due to the negligence on the part of the management the owner may have to pay all the expenses of the enquiry³⁶. By the mid 1930s, helmets and safety hats were introduced in the mines and records reveal that on two occasions, it saved the lives of two miners.³⁷ Better safety helmets made of compressed fibre was introduced in 1939 for working in chambers and openings.³⁸ In 1926 the British Government awarded 'Edward Medal' to two miners' viz. Kristo Kamar and Bhikham Sirdar, for rescuing 37 miners and 3 European officials from an underground fire.³⁹ Arrangements were made for proper training of the *sirdars* and subordinate mining officials to reduce accidents in the mine. In the year 1924, examination for the certification of *sirdars* was held in Margherita. From 1930, classes were organised to give technical knowledge to the subordinate workers in the collieries of Makum.⁴⁰ Punishments in the form of fines were collected from the colliery labourers if any safety norm was violated. The fines were very high, e.g. in 1929, the Colliery Superintendent prosecuted a labour for unlocking a safety lamp, while working in the underground, with a fine of Rs. 50.⁴¹ Though the inspection reports have mentioned about various such cases, no records were available on prosecution or any penalty to the European employees for negligence of work in the mines.

Conclusion

In the year 1901, the Indian Mines Act, 1901 was passed which allowed systematic yearly inspections of all the coalmines in India under its jurisdictions. These inspections brought to light the recurring and frequent accidents with a high fatality rate in the coal mines of India. The management and authority of the mines often tried to override the unsafe environment in the mines by shifting the onus of these accidents to the ignorance of the miners. The coalmine workers were an uneducated lot who had no prior experience of working in these conditions and were unaware of the hostile conditions in underground mines. While colliery owners focussed on extraction of coal which had a large global demand, investment on safety measures was of least concern and priority. In such an unbalanced power relation between the management and the workers, the fault inevidently was rested on the shoulder of the coalmine workers.

The inspection reports of the mines however pointed out the laxity in safety norms and emphasized that strict supervision, training of miners and changes in working techniques could reduce those accidents. The Chief Inspector of Mines wrote in his report for the year 1914-

³⁶ The Assam Mines Manual, 1927, ASA Library.

³⁷ Report of the Chief Inspector of mines in India for the year ending 31st December 1935, Accessed from- <https://dSPACE.gipe.ac.in/xmlui/>.

³⁸ Report of the Chief Inspector of mines in India for the year ending 31st December 1939, Accessed from <https://dSPACE.gipe.ac.in/xmlui/>.

³⁹ Report of the Chief Inspector of mines in India for the year ending 31st December 1926, 22 Accessed from- <https://dSPACE.gipe.ac.in/xmlui/>.

⁴⁰ Annual Report Of The Chief Inspector Of Mines In India For The Year Ending 31st December 1930, Accessed from- <https://dSPACE.gipe.ac.in/xmlui/handle/10973/22015>.

⁴¹ Annual Report Of The Chief Inspector Of Mines In India For The Year Ending 31st December 1929, Accessed from- <https://dSPACE.gipe.ac.in/xmlui/handle/10973/22014>, p. 37.

“For every case in which an accident occurs, there must be many more cases, in which wrong-doer has procured his easily got coal with impunity. That at some mines the practice is much more common than at others, an examination of the pillars, corners, and sides will show.”⁴²

The report also strongly recommended that the managers must dismiss any miner found violating and engaging in mining work in unauthorized areas under Section 14(2) of the Indian Mines Act, 1901.⁴³ However, no observation was recorded in the report of the Chief Inspector of Mines in respect of the wages paid to the miners and it was held that the accidents occurred due to the ignorance and carelessness of the miners, which could be prevented by strict punitive actions. The high demand for coal as primary source of energy and fuel and easy availability of cheap labour for extraction who were ignorant of the mining work and its hazard and the necessary safety gears left the Company owners free to decide on the mode of extraction and safety gears of miners vis-s-vis their profit.

⁴² Report of the Chief Inspector of mines in India for the year ending 31st December 1914, Accessed from- <https://dspace.gipe.ac.in/xmlui/>.

⁴³ *ibid.*