STRUGGLE FOR JUSTICE

KOLAR GOLD MINES
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INTRODUCTION

As the world moves towards Development and Industrialisation man's inventions started to intervene more and more with nature. Initially his inventions catered to necessity, then to luxuries and eventually to vested interests and profits, where he relentlessly played with nature and exploited his fellow beings. The industrial era led to a great demand for human labour, which was cheap and easily available. This led to tremendous exploitation of the working class, which was overworked, underpaid, neglected and exposed to extremely hazardous conditions.

Thousands of workers die or are maimed every year in various accidents that occur at their workplace. Analysis of the workplace accidents, devising ways to prevent them or supplying protective devices costs money and means reducing profit. In this highly competitive economic system, market shares go to those companies that keep their production cost at minimum, which is always at the expense of the workers. If the law had not prescribed minimum standard of safety, economic forces would drive the employers to spend nothing at all for the workers' safety and the maiming and deaths of workers would have risen to calamitous levels.

Inspite of the worldwide ban, we continue to produce and consume some of the deadliest pesticides and insecticides (also known as dirty dozen). We not only produce, export and consume some of the deadliest commodities but also propagate them to be "safe" for our monetary gains and therefore misinform the public.
Many of the workers are no longer powerless onlookers but have formed unions and collectively try and bring change at their workplace by fighting for their basic human rights.

It is to these workers that we dedicate our series: "The Struggle for Justice" so that they realise that their "issue" is not theirs alone but of thousands of other workers working in various industries all over the world. This is an attempt to make them aware of their rights not just as workers but as human beings and make them confident to take steps to change their existing conditions.

In putting forward the workers' plight and their helplessness in bringing concrete and permanent change in their lives, the book hopes to bring about a general awareness in the hope that the spark of knowledge shall lead to support of the workers' struggle.

Lastly, the book aspires to reach through to the management in making them realise the existing conditions and mobilize them to create a healthy and hazard-free workplace.

This booklet deals with the story of the prevalence of the pneumoconiosis in the Kolar Gold Mines and the efforts undertaken by the management to misguide the workers and the rest of the world. The gold mining started in India simultaneously to the mining in South Africa's Rand mines. Where in as the first case, Rand mines came to light immediately, in India this fact was suppressed by the
management. Blind extraction was done by various companies until it was taken over and made as public sector after independence. Various myths were propagated by the management like taking 'toddy' (a form of country liquor) can cure, to confuse and misguide workers. Papers were written by the doctors of the company and presented at engineers conferences to prove that Kolar dust is safe and behaving unnaturally.

The subjects and issues dealt in this story are a common feature in Indian and other developing countries, where wrong information is generated by the employer to misguide the workers and community. The ultimate objective of printing this story is to not only highlight this fact but also educate workers and community to first scientifically check any remedy suggested by the employer before implementing it.
KOLAR GOLD MINES

INTRODUCTION

Gold mining has always been an uncertain, insecure and ad hoc activity in the Kolar area of Karnataka. Various managements starting from John Taylor & Co. to the present Bharat Gold Mines Limited have created a picture that the running of mines here is a charity for workers and a social obligation. On one side we see the rising price of this precious metal in the national and international market and on the other are the stringent measures by the subsequent managers, which of course have made the life of workers a nightmare. The colonial rulers did not develop any alternative suitable employment for the poor in Tamil Nadu, which forced them to work in these mines in unhealthy conditions at low wages. Similarly, the BGM in particular and government of India in general never initiated any measures to rehabilitate the miners. The result now is that workers, under the shadow of insecurity and fear of jobloss are ready to accept any type of suppression from the management. It may be wage stagnation, transfer to distant mines without any proper facility or disease and deaths at workplace. In this paper, an effort is being made to understand the nature and pattern of the subtle exploitation by the BGM. The historical analysis of the development of the gold mining activity is also done.
GOLD - 'the Glowing dawn'

This metal has always occupied a very prime, prized and cherished place in human history. Humans fought many wars, killed each other in order to loot and acquire it as much as they could. Its chemical symbol, i.e. 'AU', has been derived from its Latin name - 'Aurum', which means Glowing dawn. What is so special about this metal, that makes the most intelligent animal of the earth behave so madly. The gold rush of America and Australia are such examples. It has four distinct characteristics which make it indispensable - histrons beauty, virtual indestructibility, extreme rarity and ease of workability.

During the initial days human beings found gold granules on the sands or on the earth. They simply crushed, ground and paned it for recovery. But mining started at the later period when the surface availability was exhausted. Miners had to dig hard auriferous rock to bring it up from underground manually, crush, grind, and pan for recovery. Once their digging level reached the water table these mines were often abandoned and miners moved to the next site.

Similar was the case with Gold Mining in India. In Kolar before the advent of John Taylor and Co., all the upper stock of gold ore was exhausted. During the late 19th century the Gold rush was going on in
The employment and production reached its extreme during the first decade. This process continued till 1911. By 1911 the depth of mines had increased; it also increased the problems of rock bursts. Due to the first world war the gold prices crashed in the International Market and the company was not allowed to sell gold in the open market and the profits of the company reduced. The number of persons employed had always been fluctuating depending upon the profit and loss of the company. Today the company employs only seven thousand workers and the output is 1700-2000 kilo of gold per year. Out of these six thousand employees there are around 432 officers.

**Revenue**

Gold plays a very important role in the Indian social structure. India is said to have the largest stockpile of private gold holdings which is estimated around 8,000 tonnes, mostly in the form of jewelry. Kolar gold has not only contributed to these private holdings but it has also played a very important role in the economy of Mysore State and that of India afterwards. KGF alone was responsible for no less than 97% of all Indian gold production over 1885-1955. From 1880, the state govt. got a royalty of 5% on the net realization of gold. Further, an additional royalty of 2% on dividends declared, was levied from 1910. It was increased from 1940 on a sturdying scale based on dividends declared or adjusted profits. 50% of the total contribution in the budget of Mysore state was from the KGF.
CONDITIONS OF WORKERS IN INITIAL DAYS

The majority of the labour force here is from Tamilnadu. Starting from the initial days, labour has remained at the secondary position, since there was always less extraction of Gold from the comparatively large amount of ore and as Company had to pay royalty to Mysore state, dividends to shareholders and high salaries and luxurious facilities to European Engineers. The company always employed 'natives' at minimum cost, because that was the only expenditure they thought was 'wasteful' and controllable. The colonial policies of Britishers resulted in mass poverty and abundance of cheap labour. Therefore wage rate was set at 4-6 annas per day for men and 3-4 anas for women, for the underground work. This was the reason why the profit of company increased even after paying levy to Mysore state and Government of India.

But once the depth of mine increased (3-400 feet), there was change in attitude of the workers. By 1886 the supply of workers reduced, and in May 1887 the Superintendent of Mysore Gold Mine Company wrote to Mysore Residency seeking permission to import Chinese labour from Hong Kong. The British had already employed many Chinese in their Rand Mines. Not only did the resident of Mysore grant permission but the Mysore Darbar, who had fifty percent of its budget from the KGF, also readily agreed to the proposal. The plan seemed feasible when Government of British-India also gave a green signal.
The politico-economic history of KGF makes it clear that management did not secure the commitment and settlement of labour force by paying good wages or by providing safe and healthy living and workplace conditions. But the companies opted for more subtle ways to win both. On one hand they started more visible welfare activities, which were projected as the charity done by management for the workers. They constructed low cost asbestos houses for laborers, day and night schools, well lit roads, employed teams of sweepers to keep the city clean. They opened a hospital but kept away the diagnostic equipment for occupational diseases. The welfare activities were also projected as mere pomp and show as to improve their image in other parts of the world.

Truly KGF followed the policy of Carrot and Stick, in which Carrot was shown to the World Community but did not allow workers to eat it. The 'Stick' which was to keep workers disciplined and the Management united had the full co-operation from the police and judiciary of Mysore raj. The Company also maintained a large well equipped private security force. The management was strictly opposed to any uniting effort among the workers. In 1930, on 1-28, April, a workers movement started in KGF. The army and police were called to suppress it and in this operation, in which the management and Mysore raj were partners, 44 workers lost their life. The management was clever enough to immediately step up its welfare propaganda to erase the memories.
HOUSING

KGF preserves the record of the comments given by the visitors to KGF but they don’t highlight statements given by them about the living and working conditions of the labourers. When Mohan Das Karamchand Gandhi visited the township he expressed his dissatisfaction over the housing and sanitation conditions. The residential colonies are known as ‘camps’. But they are like prison camp for labourers and luxury camps for the managers. To attract the best brains for mining and allied activities from west, the company provided best facilities to them, which included not only the heavy salary package but also huge banglows with all the amenities one would afford, and of course a huge brigade of servants. On the other hand the actual working hands i.e., labour lived in one room houses made-up of asbestos sheets. Even today workers live in the same houses. During the summer these houses are heated like ovens, no water or other basic sanitation facilities are provided. After the take-over of these mines by the Government, various cost cutting measures started. Not only was the expenditure on labour welfare reduced, but many employees were given compulsory and voluntary retirement. The construction of new houses and the maintenance of old ones was stopped. So today we see that lot of workers live either in these one roomed, badly maintained houses or in the huts.
Even at that time, when the budget of Mysore state was around Rs. four crore. Half of this amount used to come from the royalty and Gold duty from KGF; never was any thought given by the management or the Mysore state towards the housing or basic amenities for workers.

WORK PROCESS

As written earlier, before the arrival of John Taylor & Sons, the 'ancient' miners used to mine till the water table and then shift to a new place. So in the initial phase i.e. 1880's and early 1890's the early 'ancient-tracks' were closely followed to sunk shafts. The excavations were done through quartz to minimize the excavation of barren rocks. It was due to hurdles faced by the companies at various stage of mining that various technologies were introduced. The old techniques phased out and new ones were introduced in this process. Earlier the passages were made in following the line of the reefs which were often twisted. From 1890's it became a practice to sink straight shafts as it was difficult to operate in the twisted areas. As mining penetrated to even lower depths it eventually became necessary to sink secondary, and ultimately territory shafts to link up the primary ones. Now the mines are deeper than ever (in fact deepest in the world), so they their pose dangers, difficulties and hazards. These problems include not only rock bursts, heat, high geothermal gradients but also difficulty in maintaining proper ventilation, and dust suppression and water spraying system. These physical dangers can be clubbed into:
1. Sudden and violent ground movement
2. Failure of equipment, sometimes coupled with human failure,
3. Inundation and flooding (over-flowing)
4. Fire.

The outbreak of fire in deep mine can be due to:

- Spontaneous combustion
- Electric short circuits
- Blasting operations
- Careless handling of safety equipment

The Central Mines Rescue Station was set up in 1923 in Kolar.
ROCK BURST

Rock bursts are also known as 'air blasts' or 'quakes', if there is an ejection of rock from the working face accompanied by and explosive noise followed by a blast of air. The general belief is that this happens due to local strain and damage and is confined to usually small area. Quakes are regarded as different in nature and origin from air blast but in many respects resemble small earth quakes. They are supposed to occur due to over-load, or stress resulting in severe damages to the working. The failure of pillars and solid abutment are held as primary cause for the occurrence of quakes.

During the initial phase the problems of rock burst was not critical, but as the depth of mines increased, this problem became more serious, particularly where the one body to be mined was associated with faults and geological infursion. The first rock burst tremor is usually followed by a series of tremors over a period of several days. Buildings on the surface within 2-3 kms. from the epicenter have been damaged. The intensity of some major rock burst tremors had been upto 4.5 to 5.0 on the Richter Scale. The very first rock burst reported to have occurred in the year 1898, in a slope below 969 feet in the old Oorgaum mine (now know as a part of Champion Reef Mine).
The exact mechanism of rock burst is not yet clearly understood though large-scale investigation are been done to study this phenomena. The phenomena of ground movement around mining excavation in hard rock has been explained by theories such as Dome theory, Liner Arch theory or Beam theory.

Rock burst research Institute was formed as late as in 1955 and which worked in collaboration with University of Newcastle, U.K. Nothing substantial has been researched by the Institute.

VENTILATION

During the initial period, the ventilation was by natural means, as the lighting was with the help of oil lamps. But as the depth increased and also, to increase the output, technical upgradation became necessary. Electricity came in —, with it came the electric ventilation system. In the present phase, especially after the nationalization, the depth of mines increased and also increased the problems related to it. As pointed out earlier it not only led to severity of rock-bursts but also dust suppression; ventilation became difficult. Today air cooling/ conditioning systems are not effective at the workspot. Due to depth, wet guiding and water spray is also impossible.
ACCIDENTS

John Taylor divided the functions and duties of the workforce in the KGF on a racial basis. All the administrative and supervisory roles were assigned to the white men. Then came the Anglo Indians who were gangmen and foremen, skip drivers in underground duties; on the surface they were trained engine drivers, controlling signals of railways, working in boilers, hoisting rooms. The reason given by management was, jobs long considered 'too responsible' were not to be left for 'natives'. Because of this, natives were mostly labour hands doing
physical labour only. No Indian was at the supervisory or officer level and it was only after the country became independent and due to large scale migration of the British and European to their mother-land that Indians got a chance to control and supervise the process of mining. But tragically the general pattern of the behavior of the company remained the same.

If we go through the accident record of John Taylors i.e. between 1891-1946, more than 3,398 workers lost their lives in various accidents. The worst was on 11 September, 1897 in Champion reef mine where 42 labourers died and several hundred got injured, due to the carelessness of surface engineers, which led to over hundred workers falling on top of one another down the succession of steeply inclined ladders that were in place from the shaft room.

HEAT

Heat is the next physical hazard which threatens the health of underground workers. As the workspot is deep into the earth, the temperature is quite high. Most of the labourers complain about the ineffectiveness of the refrigeration plant and the spot coolers. Due to heavy work body itself generates the heat, which takes miner’s body temperature to the toleration level limit i.e. 37 degree centigrade. In the deep levels of KGF, the geothermic gradient around result in a virgin rock temperature of 50 degree centigrade at the depth of 10,000 feet. Unless ventilation circuits are not planned, poor and
unhealthy workplace condition can result. No one disagrees with the economical methods to be adapted for mining, but equally important is the safety and healthy workplace for workers.

The basic mining principle says that the environment conditions inside the underground mine depends on the following factors:

1. Virgin rock temperature
2. Air Velocity and its quality
3. Cooling facilities
4. Extent of the workings
5. Methods of mining

**DISEASES**

Various diseases are found in the area due to poor working and living condition such as rabies, bubonic and pneumonic plague, tetanus, typhoid fever, malaria, tropical ulcer and leishmamasis, hook worm, leprosy, heat exhaustion, sprue, infection with cryptococcus. Most of the diseases listed above are manifestation of unhealthy living and working conditions maintained by the stringent measures of subsequent managements. In addition to all these, the underground miners workers have more diseases like lobar pneumonia, hookworm, backpain (lumbago), pneumoconiosis. How can one forget about the massive plague in and around Kolar which took thousands of lives?
OCCUPATIONAL HEALTH

In any industry where the focus is on production and profit by reducing labour cost, occupational health hazards go on the rampage. KGF has its peculiar character of ad hocism and perennial threat of closure, created by various managements helped in not only suppressing and manipulating the data but also demoralising workers to initiate any action against the untimely deaths suffering of their colleagues. Even though KGF hospital started functioning in early days, but it has always kept itself away from the diagnosis and identification of occupational diseases. It behaved in the typical manner of 'car-
rot' policy of KGF by putting more budget and manpower in social welfare and non-Occupational Health issues, like health and family planning or any other popular propaganda. Failure of non-identification of occupational diseases led to creation of many myths about KGF which were propagated at national and international level. To this propaganda not was only the management a party but even pre and post independent governments helped them to do so. Doctors and medical experts of KGF wrote many research papers highlighting the prevalence of disease in the mines, but these papers only remained in the academic journals and the management did nothing for the prevention. The list of some of the papers which became famous is given below;

1. Dr. Aoanteere published his thesis on OH&S issues in KGF in 1936.

2. Dr. Caplan’s series of articles was outstanding.

"A critical analysis of collapse in underground workers in the KGF (1944)"

"As experimental investigation of the effect of high temperature as the efficiency of workers in deep mines”

Pneumoconiosis in KGF (1947) Dr. Caplan/Lindsay.


BACK ACHES

Fault in the workstyle, shafts, tunnels and phase ultimately manifests in various health abnormalities among the people who work there. 'Lumbago' (crippling in the lower region of the low back) is the most common problem among the workers. In various papers and in informal discussion doctors do recognise that this acute back ache is due to faulty working posture. But KGF management has done nothing to improve the workplace problems.

PNEUMOCONIOSIS

In 1979, when an ILO consultant visited the area, he saw the severity of the problems of pneumoconiosis and recommended that BGML Research and Development wing of BGML hospital should become the nucleus for future pneumoconiosis research in India.

The pneumoconiosis in KGF has its distinct history. It not only combines the characteristics of careless management but also the features of false propaganda and its sustenance at national and international level, by various means. Although Gold mining in organized manner started here in 1880 but there was no recognition of prevalence of pneumoconiosis till 1934. Whereas in South Africa
(Rand area) mining started in 1886 and by 1892 the identification and recognition of pneumoconiosis started. There it was known as by the name of 'Miner's Pthisis'. It was so rampant that by 1901, annual death rate was 73 per thousand underground workers in South Africa.

On the other side classic propaganda was done by the master managers of John Taylor. They not only made workers but also forced the outer world to believe that the Kolar rock is safe. They said that due to some unknown reasons Kolar rock is behaving differently. They continued their successful propaganda for more than fifty years. It was the striking absence of silicosis among Kolar miners which led Prof. W.A. Jones (1933), to propagate its 'sericate theory' of silicosis and to point out what he called 'Free-Silica Felled' in the pathogenesis of silicosis. His main submission, based on petrological studies (study of rocks), was that while South African rocks contains a large proportion of sericate or secondary white mica, kolar rock did not contain enough sericate to produce silicosis. However, his theory was dismissed, on the grounds that apparent negative instances of silicosis on the KGF were not convincing because the problem here had not been adequately diagnosed to warrant such a conclusion.

The company which was earning enormous profits, providing a luxurious life for officers and contributing half of the budget of Mysore state,
installed the first x-ray machine in 1915. Since this machine was not capable of effective radiographs reading no authentic case came forward. Then came the year 1934. This year was significant in ruining the false propaganda of company. In early 1934, when the debate was going on about the presence of this disease, the Mysore Government appointed a special committee under the Chief Medical officer of Mining Board, local medical officer and the physician of the Krishna Rajendra Hospital, Mysore as its members. In this year only, the first X-ray machine was installed in KGF Hospital. The special committee conducted a preliminary investigation and unanimously concluded that silicosis did exist but the incidence was much smaller and takes longer time to develop, as compared to South Africa. The conclusion of special committee was probably based mainly of clinical rather than on radiological or pathological evidence. Later on larger scale radiological surveys were undertaken followed by autopsy studies. The earliest recorded autopsy for pneumoconiosis in KGF was in 1939. The difference, it was pointed out by the special committee, was evidently due to fact the Kolar rock contains only 5.20% of free silica. Whereas South Africa scruples contained 43.98%.

In 1940, the Mysore Silicosis Rules were framed and introduced. They were framed exactly on the lines of Miner’s Phthisis Compensation Act of South Africa. This rules demanded periodical examination and systematic investigation of all the workers involved in gold industry in KGF at intervals of not more than
5 years over a period not exceeding more than 10 years and thereafter two yearly intervals or even short intervals in special cases, during the services and also on termination of employment. A pneumoconiosis medical board was constituted for the conduct of examination, submission of special reports and award of compensation.

The first comprehensive report on the prevalence of pneumoconiosis among the underground workers was presented by Dr. Anthoney Caplan in 1947. His study was based on the clinical and radiological examination of 7653 workers with five or more years in underground operations. He also studied the 60 lung specimens obtained from autopsies from 1940-1946. In 1950, Prof. Jethro Gough, of Pneumoconiosis Research Unit, Cardiff, South Wales, also studied a few specimens of lungs from KGF. The above studies found some common points between the pneumoconiosis on the KGF and the coal mines, which led him to name it as Kolar pneumoconiosis.
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