

SOME PROBLEMS OF INDIAN COAL.

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Little public attention has so far been focussed on India's importance as a producer of coal, for which her position among the coal-producing countries is apt to be underrated. There is besides a paucity of literature on Indian coal. Though India's average production stands between twenty to twenty-five million tons out of the world's total average of twelve hundred to fourteen hundred million tons, it is interesting to note that as a coal-producing country India stands second only to Great Britain in the British Empire and ranks ninth in the whole world. Besides being the chief fuel for numerous industries and domestic purposes the potentiality of coal as an important raw material for chemical industries has been in increasing evidence in recent times. The National Institute of Sciences is to be congratulated on the timely endeavour to present to the public a comprehensive literature on coal dealing with its various technical and commercial aspects. On the kind request from the Convenor, Dr. C. S. Fox, I have decided to discuss in the following pages, only a few problems relating to Indian coal, leaving other topics on its trade and technique for more competent authorities to deal with. The points I proceed to take up are: (a) Railways and coal, (b) competitive conditions in the coal trade, (c) marketing of coal, and (d) the problem of conservation.

(a) *Railways and Coal.*

The historic relation between Railways and Indian coal is significant from many points of view. It was the extension of the Railways to Raniganj that led to the rapid development of the coal industry. The beginning of the coal industry dates back to 1774. But its growing importance began from the year 1885 when the East Indian Railway first opened its line up to Raniganj. Before the advent of Railways there were serious transport difficulties and so the development of the coal industry was rather slow.

Besides being responsible for developing the industry the Railways in India have, for some years past, been the principal determinant of the nature and extent of the trade in coal. The ownership and management of collieries by the Railways themselves forms a long-standing controversy. In 1871, the East Indian Railway acquired large tracts of coal-bearing lands at Giridih for the purpose of raising coal for its own use. At present, all the important Railways have got their own collieries. It is no doubt true that as a public utility concern Railways must be assured of continuity of supply of coal at a fairly steady price. It is also argued that the Railways are commercial enterprises and they must be free to develop their business interests and

devise combinations of a vertical nature if they deem it profitable. But the principle of the State entering into direct competition with private enterprise, purely from a commercial motive, has little justification from a social or economic standpoint except in a socialist regime. I think there is much to be said in favour of a scheme of wholesale nationalisation of our mining properties (as has been recommended by the minority of the Coal Mining Committee) against the present arrangement of piecemeal socialisation which acts as a standing menace to the industry. It is now high time to re-open the question whether the Railway collieries should be closed down. The Coal Mining Committee also were not in favour of the proposal. The best way in which Government can help the industry is to close down the Railway collieries for a few years, particularly in periods when the coal industry is in a bad way, or to work only one or two collieries and stop the rest, so that the outlook of the coal trade may be improved.

Railway tenders and the working of the freight system have no less influence on the coal trade. Railways are the principal consumers of Indian coal. In 1935 they consumed 7,293,000 tons of coal or 31·9 per cent of the total, while in the same year they produced 2,725,000 tons of coal. The internal price of coal is determined chiefly by the rates obtained at Railway tenders and industrial concerns refuse to contract at rates higher than the rates of the Railway Board. The Railway Board cannot be credited with exercising this dictatorial power with an eye to the well-being of the industry. Taking advantage of the weak organisation of the warring coal interests the Railway Board's policy has but tended to depress the price, especially in bad years. A helpful re-orientation of the Railway Board's tender policy is a much-needed reform. The present arrangement of State Railways buying two-thirds of their coal requirements from the open market should be increased by another million tons in order to extend appreciable relief to the coal industry.

(b) *Competitive Conditions in the Coal Trade.*

Competition, which is a common economic theory, makes for efficiency and hence a better trade outlook. Unfortunately in the case of the coal trade competition has been the potent factor in hopelessly depressing the industry in every way. Indian coal has to face competition both external and internal.

(i) *External competition.*

External competition virtually stopped our export trade in coal. The foreign markets have for long been the weakest spot of the Indian coal trade. It is here that the trade has suffered the worst vicissitudes. It is true there is a small surplus of production over consumption in the country. But disposal of this surplus at remunerative prices is of vital importance to the whole industry. During the post-war period the Government of India placed a ban on the export of coal and the consequence of which was that South Africa

captured our eastern export markets and even to-day we have not been able to regain those markets. Loss of the export trade affected Bengal coal most seriously. Due to the comparatively high Railway freights on internal movement of coal and the increasing tendency of industrial concerns in the heart and further ends of the country to have their coal supplied from collieries near at hand, Bengal and Bihar coals have to fall back upon the export trade. As for quality and price, Bengal and Bihar coals enjoy definite advantage for export trade.

The most disquieting feature of external competition is, however, the advent of South African coal in the western parts of the country, especially in Bombay and Karachi. Bombay and Karachi consume 97 per cent of the total quantity of the imported coal. High transportation cost makes it unremunerative for Western Indian concerns to replace South African coal by Raniganj or Jharia coal. Freight per ton from Raniganj to Calcutta is Rs.3-12-0 whereas it is Rs.12-6-0 and Rs.15 for Bombay and Karachi respectively. The secret of the competitive strength of South African coal is that it is bounty-fed. Bounties are given in the shape of Railway freights which have little relation to economic rates. There are three different coal rates, one for internal movement, another for coal intended to be bunkered and a third, which is the lowest, for export of coal to countries like India, Ceylon, Sumatra, etc. There is another important circumstance which it is difficult to provide against, viz. coal from South Africa is carried practically as ballast.

(ii) *Internal competition.*

In the internal market also the coal trade presents a spectacle of lack of organisation and cut-throat competition which entails in its train considerable loss of life and property. Reference has already been made to competition from State-owned Collieries. Apart from this, the competition for custom that exists among collieries owned by Limited Companies and Private Owners beggars description. Under-quoting, rate-cutting and instances of similar unfair devices can be multiplied. Responsibility for these evils must be attributed to the unorganised character of the industry and the absence of a central controlling authority. The three Associations that exist can have no concerted plan of action. Opinion is irreconcilably divided even among members of the same organisation. Observing this confusing phenomenon of competition, the coal Mining Committee very aptly remarked 'The psychology of the trade is still too individualistic for concerted action even in its own interests'. The coal interests themselves are no doubt mainly responsible for this state of things. But an impartial critic would not let off the Government clean-handed. I am not indulging in the too common practice of criticising the Government. But it must be admitted that Government have so far failed to protect the vital interests of the country connected with the coal industry. Governments in Great Britain, Germany, France and Japan were fully alive to the question and exerted their authority with legal measures,

effecting regulation of output, allocating quotas, fixing minimum prices, control of tonnage, establishing Coal Mines Board with official patronage, enforcing compulsory co-operation among Private producers under State control, subsidising cartel formation and eliminating unhealthy competition. It is indeed a sad commentary on our Government that they were too cold to feel the urgency for any such initiative and that they were instrumental in encouraging competition and scramble. The three bodies interested in the coal trade of Bengal and Bihar jointly submitted a restriction scheme to the Government of India in 1933, which, for reasons best known to them, the Government did not consider it wise to accept and implement.

The jute and tea industries here are perfectly organised. Sugar and cement have excellent marketing arrangements. The coal interests can profitably emulate their ideas. In collaboration with the recently formed Stowing Board the three Associations should bring into existence a strong central organisation in the form of a cartel with necessary powers for regulating output, fixing quotas and minimum prices, etc., with a Marketing Board attached to it. The evils of competition will be further minimised if tenders for Railways and other Government or semi-Government concerns are not entertained except from bona fide members of the Associations who are consenting parties to a working agreement of the nature indicated here.

(c) *Marketing of Indian Coal.*

The figures of production and internal consumption of Indian coal almost balance each other. This may lead one, unacquainted with the actual conditions prevailing in the coal market, to form a very happy picture of the Indian coal trade. The general conception that the demand for coal is inelastic is apt to lend an added support to conclusions of this nature. The fact is that there are certain extraneous factors seriously interfering with the market for Indian coal and this is why it cannot be disposed of so easily and profitably.

A little over twenty million tons is India's average production. The years 1937 and 1938 were exceptional, as the production of these two years exceeded twenty-two million tons. The annual consumption varies from a little over nineteen million tons to twenty-two-and-a-half million tons. The annual export averages nearly 2 lakhs of tons. The annual import is to the extent of seventy to eighty thousand tons—the principal sources of import being in the order, South Africa (thirty to thirty-five thousand tons), United Kingdom (ten to twenty thousand tons) and Australia.

(i) *Export Market for Indian Coal.*

The export trade in Indian coal assumed importance only in the five years ending 1900 when the average annual export figure was 30,500 tons. The peak in the pre-war period was in the year 1906 when over a million tons were exported. For the decade ending 1915 the annual export average was

approximately three quarters of a million tons. 74,000 tons were exported in 1918, and 1920 saw exports mounting up to as high as 1.2 million tons. Then came the official embargo which was not entirely removed till 1923. With the help of the Coal Grading Board, which was appointed following the recommendations of the Indian Coal Committee, Indian coal in recent years has no doubt made some headway in the lost markets.

A minority of the Coal Mining Committee were definitely against stimulating the export trade in Indian coal. In their opinion a stimulus to export was not only not worth giving but it was positively detrimental to the country's interest. That the opinion, from a conservation point of view, is valuable cannot be denied. But in the present state of glut in the market with severe foreign competition we cannot do away with the export trade. When the circumstances arise for a maximum utilisation of the entire coal resources of the country with the payment of adequate prices for all grades, then and then only should the question of stopping export trade be considered. Export may be stopped at any time by the simple device of cancelling the rebates.

(ii) *The Story of the Internal Market.*

Nearly 98 per cent of the coal produced in India is consumed within the country. The largest consumers are the Railways with about 33 per cent of the total production. The next in importance are the iron, cotton, jute and sugar industries which consume 40 per cent altogether. Inland steamers, Tea Gardens and Paper Mills consume 4 to 5%. Other forms of industries and domestic consumption account for 9 to 10%. Consumption at collieries and wastage are estimated at 10%.

The problem of the domestic market is mainly one of finding a steady and economic price backed by unhindered movement of coal throughout the length and breadth of the country—free from such artificial restrictions as heavy freight and surcharge which reduce its competitive power to a considerable extent. That the price of Indian coal during the preceding years was exceptionally low and sometimes uneconomic no one can deny. Even the Coal Mining Committee, who could be little suspected of any sympathy for the Colliery owners, remarked 'there seems little or no margin of profit in the prices which most coal of good quality has been fetching during the past few years'. For 1937 the average value of coal per ton in India was Rs.3-2-0, whereas in Great Britain it was Rs.10-2-0 and in Canada and South Africa Rs.9-5-0 and Rs.3-11-0 respectively.

The Railway surcharge though reduced at present to 12½%, together with the Existing Cess, River dues, etc., is a definite handicap and specially shuts out Raniganj and Jharia coal from western Indian markets. The coal interests were insistent on their demand for reduction of these transport charges. Recently the Chief Commissioner of Railways is reported to have said that reduction in the coal freights had not been followed by any increase in traffic and that the proposal for the removal of surcharge would mean loss

of revenue of about Rs.75,00,000. A small reduction would no doubt have little effect. To have the desired result a substantial reduction is necessary. Reduction in the freights and abolition of the surcharge, coupled with an increase in the present duty of 10as. on foreign coal, should be such as to equalise prices of foreign and Indian coal in all parts of the country. Special inducements may also be given to industrial establishments by reducing pro-rata freight and cess on inferior coal.

The threat of electricity and other cheaper substitutes make some people apprehend that the demand for coal will be substantially reduced in future. Against this we can view with confidence a still greater increase in the demand for coal, possibly outstripping supply, in the coming days of progressive industrial activities in India. Coal is destined to have a bigger market not only as a fuel but as an important raw material for various synthetic products and for its numerous by-products of no less importance.

(d) *The problem of conservation.*

The problem of conserving the coal, particularly the resources in good quality coal, has of late become very prominent in the country on account of the interest taken by the Government, the public and the subsequent passing of the Coal Mines Safety (Stowing) Act. The question of conservation first came to attract the attention of the Government when Mr. R. R. Simpson, the late Chief Inspector of Mines in India, declared in his presidential speech as President of the Mining and Geological Institute of India that coking coal of good quality in India would last only for 45 years. The Government of India were upset by this alarming statement of Mr. Simpson and they requisitioned the services of Mr. Treharne Rees, a coal expert, who was to report on the most economical extraction and conservation of coal. The next to undertake estimates of the probable reserve of coal in India were Dr. Sir Lewis Fermor and Dr. C. S. Fox, both of the Geological Survey. Dr. Fox estimated that at the end of 1932, the total reserves of coal in India were 60,000 million tons of which only 20,000 million tons could be worked. Following Dr. Fox, the Coal Mining Committee (1937) arrived at the conclusion that at the end of 1936 the reserves of good quality coal were 4889.1 million tons of which only 1426.2 million tons were good quality coking coal. The Committee further concluded that the reserves of good quality coal and coking coal, up to the end of 1936, would last 122 years and 62 years respectively. As for Jharia coal the Committee made a more disappointing estimate in that good quality coal and coking coal of that field would last only 81 years and 57 years respectively. Considering the vital importance of coal the statements no doubt arouse grave apprehension. But it should be realised that India is a vast sub-continent-like country and a comprehensive geological survey has not been undertaken. The Coal Mining Committee also held the view that the reserves of coal of inferior quality in India were practically unlimited. But these arguments are not meant to minimise the necessity of conservation.

Conservation, broadly understood, implies prevention of avoidable waste of coal through improved methods of mining, making for maximum extraction consistent with safety. It also includes utilisation of the different grades for appropriate purposes leading to maximum satisfaction for each variety.

Methods of extraction have nowhere come to perfection. The Coal Mining Committee cited the case of the United States of America. Here in 1921 the average waste was as high as 34·8 per cent. The average rate of waste in India, according to the committee, is to the extent of 50 per cent with a tendency to increase. As a zealous guardian of the nation's interests the Committee recommended compulsory stowing in the Coal Mines, which the Committee hoped would prevent 40 per cent of the avoidable waste, leaving 10 per cent waste as beyond control.

Legal enforcement of compulsory stowing is the first of its kind in India. The measure would certainly involve collieries, particularly those producing inferior coal, in incalculable hardship. A proposal of this nature it is understood is still under consideration at Geneva. As would be expected, the recommendations of the Coal Mining Committee and the Stowing Bill as well, while it was being discussed in the Central Assembly, evoked strong criticism from different quarters.

Conservation through the best possible utilisation of the different grades of coal depends largely on extensive research and investigation into their physical and chemical properties. So far there is no evidence of any effort in this direction and the indiscriminate use of all grades of coal, resulting in heavy loss, is going on. Only about two per cent of the entire coal resources of India belong to the Coking Coal variety. The remaining 98 per cent are non-coking and low grade coal, of which only 10% constitute quality coal. Superior quality coal from which hard coke is manufactured for metallurgical purposes is indiscriminately used for steam raising in locomotives and power houses. Instances of similar misuse can be multiplied. The need of the hour is to encourage study and research for finding profitable uses of superior as well as inferior coal as fuel, raw materials and sources of numerous by-products.

As for research and investigation, it is the Government who should take the lead, because the responsibility is primarily its own. Universities and selected Technical Institutions may do useful work in this line. The Coal Mining Committee recommended the establishment of a Coal Research Board. The duty of the Board should be more comprehensive and I suggest the formation of an Indian Fuel Research Board which should be entrusted with carrying research into the entire fuel resources of the country. Great Britain, Germany, Russia and the United States of America have already such Boards functioning within their borders. Great Britain spends nearly one hundred thousand pounds a year and the United States of America spends four to five hundred thousand dollars for the purpose. Let us hope that the wheels of Government will move in this direction.

