

Assessment of Status of Underground Fire around a coke plant in Jharia Coalfields, India

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Lodna Coke Plant, an industrial unit of Bharat Coking Coal Limited (BCCL)-a subsidiary of Coal India Limited (CIL) in Jharia coalfields was shut down due to approaching underneath coal seam fire. A scientific study was conducted by Centre of Mining Environment, Indian School of Mines to assess the status of fire vis-à-vis stability of the industrial structure. This was a challenging assignment as few of the underneath seams were virgin and some were unapproachable below the coke plant. The investigators took about three months to complete the study. This paper throws light on the method of investigation for the approaching mine/coal seam fire in a safe and scientific manner. The basic aim of this study was to provide status of fire in and around coke plant without prediction of any time frame for propagation of fire in near future, as the control of mine fire depends on the technicalities required for the fire control and the action taken by the BCCL mine authorities. Study includes measurements of surface temperature, underground temperature with available bore holes, analysis of coal and gasses present in various coal seams. Based on various observations and calculation findings are elaborated and submitted.