

ABNORMALITY OF THE CHIRIMIRI COALS VIS-A-VIS SPONTANEOUS COMBUSTION.

BEHERA, P., UTKAL UNIVERSITY, BHUBANESWAR, ORISSA, INDIA.
PATTANAİK, D., DD COLLEGE, KEONJHAR, INDIA.

*Abnormality in Cirimiri coals, Surguja district, Madhyapradesh, India was measured by volatile matter displacement and calorific value displacement. Both parameters were calculated by applying Seyler's formula based on the elemental percentage of carbon, hydrogen and oxygen. Both the parameters were correlated with various maceral compositions of the vitrinite, liptinite and inertinite groups. Further correlation was made with the crossing point temperature. *The experimental results of the correlations showed good systematics for the Cirimiri coals. It was observed that the $\Delta V.M.$, the difference between calculated volatile matter and volatile matter found by experiments (a measure of abnormality in coals) gradually increased from the bottom Sonawani seam towards the top Duman seam commensurate with the stratigraphic succession. Similar relation was also vindicated by the other parameter $\Delta C.V.$, the difference between calculated calorific value and the value found experimentally. $\Delta V.M.$ and $\Delta C.V.$ put up a positive correlation with vitrinite and negative correlation with inertinite and neutral relation with liptinite macerals. *The relation of crossing point temperature of coals with $\Delta V.M.$ and $\Delta C.V.$ showed that it decreased with the increase of $\Delta V.M.$ but decreased with the decrease of $\Delta C.V.$. *All the parameters testify that the degree of proneness to spontaneous combustion of the Cirimiri coals increases with the increase of abnormality in coals.