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Self-heating electrically conductive cement composites

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ABSTRACT

Electrically conductive cement composites (ECCCs) contain conductive agents to efficiently form electrically conductive pathways in matrix. This study employed carbon black and carbon fiber as the major conductive agents. Among all the mixtures examined before, a representative ECCC mixture was investigated under three curing conditions (depending on temperature and humidity), rendering different microstructural and thermal properties leading to varying voltage-connected self-heating capacity. This study suggests how the 24-h self-heating performance of ECCCs can be conserved.

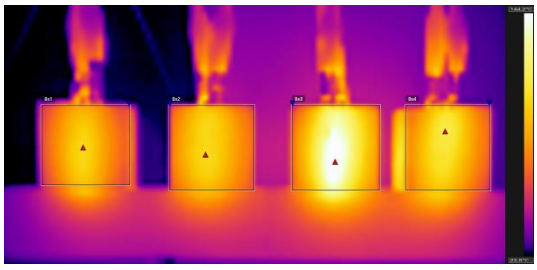

Fig. 1 Thermal image of voltage-connected ECCCs

REFERENCES

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