

Study of Reliability Test and Analysis for Miniature Circuit Breakers

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Abstract-As the miniature circuit breakers are widely used for household and similar installations, the reliability of miniature circuit breakers is becoming more important. This paper mainly concerns the reliability of the miniature circuit breakers whose rated current is 63A or below and voltage is 380V or below. This paper mainly includes four parts. First, this paper analyses the failure modes and establishes the reliability characteristic parameters; second, this paper discusses the test methods of reliability demonstration test in details; third, the principle and structure of the test device is chiefly modified; at the end, a series of reliability compliance tests on a few typical types of miniature circuit breakers were carried out, and this paper makes failure analysis for miniature circuit breakers and therefore puts forward some measures of improving their reliability level.