

THE MEASUREMENT OF THE CONTACT AREA BETWEEN OPAQUE OBJECTS UNDER STATIC AND DYNAMIC CONDITIONS

A literature survey of contact measurement methods revealed no suitable method for measuring wheel-rail multiple point contacts under dynamic conditions. After obtaining acceptable static measurements for rail head-wheel tread contacts a method, using low pressure air, was devised and used in a flange-gauge corner wear experiment. Multiple point contacts were successfully measured and wear was continued until conformality was closely approached. This new and novel method has produced the only known results for full scale wheels and rails under dynamic conditions.