

## APPENDIX II

### THE AUTOMATICALLY-OPERATED WINDMILL "TRAANROEIER" IN THE ISLE OF TEXEL

Abstract of a talk by Ir. F. D. Pigeaud at Oosterbeek on 14 May 1965.

The design of the sails of the "Traanroeier" is in some degree based upon the spring sails invented by Andrew Meikle in 1772 and on the patent sails invented by Sir William Cubitt in 1807. Both kinds of sails are admirably described in a paper on "Windmill Sails" presented on 28 March 1945 to our Society by E. Lancaster Burne, John Russell and Rex Wailes (*Trans.*, XXIV, 147-161). The design was also based on the self reefing sails, which are still used in North-West Germany and in the province of Groningen in the Netherlands.

The common feature of the above mentioned British, German and Dutch sails is the use of shutters hinged on pivots which are perpendicular to the stocks of the mill, and this feature is embodied in the "Traanroeier" sails. However, the shutters of the "Traanroeier" are made of aluminium sheet 1 mm. thick, not of canvas covered frames as in England, or of wood as in Germany and Groningen. The position of the pivots of the shutters with respect to the width is also different in the "Traanroeier" mill, where they are clamped on  $\frac{1}{4}$  from the leading edge while the shutters in Germany and Groningen are hinged usually on  $\frac{1}{3}$  from the leading edge and in England on the leading edge itself. The reason for this different position in the "Traanroeier" shutters is the complicated balance between the