



THE ENFIELD CYCLE COMPANY LIMITED

CYCLE & MOTOR CYCLE MANUFACTURERS

HEAD OFFICE AND WORKS-

REDDITCH



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OUR REF.

From Mr. R. A. Wilson-Jones.

To:-

Major F. T. Smith,
Major V. T. Mountford,
Mr. V. L. Young,
Mr. J. J. Bocken,
Mr. R. Thomas,
Mr. R. Lovkin.

29th September 1960.

Cylinder Head Design

A meeting of the Birmingham A.R. Centre of the Institution of Mechanical Engineers was held Tuesday night to discuss the proposition 'Are compression ratios above 10:1 worth pursuing?', Mr. Withers of British Petroleum Ltd., opened the discussion and was of the opinion that about 10:1 was the useful practical limit for compression ratios irrespective of what fuels may be available in the future. Mr. Charles Goodacre of The Ethyl Corporation was in favour of compression ratios higher than 10:1.

From the remarks of both the opening speakers and from the general discussion which followed it became evident that one of the problems of very high compression petrol engines is the design of a reasonably compact combustion chamber consistent with the necessary clearances to enable the valves to operate. Both the opening speakers and many of the succeeding ones were of the opinion that the oversquare engine is unsuitable for very high compression ratios and suggested that if these came into general use engines would have to be made about equal in bore and stroke.

The discussion centred mainly round engines for passenger cars and commercial vehicles in both of which fuel economy is of more importance than it is on motor cycles and specific performance is of less importance. The engines considered were all of the vertical valved type with 'bath tub' combustion chambers and even with this type of engine it was considered desirable for the combustion chamber to take the form of a recess in the piston crown (as in a diesel engine) in order to provide as compact a combustion chamber as possible.

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Royal Enfield.

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