

The Journal of
**THE ROYAL
AERONAUTICAL
SOCIETY**



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APRIL 1951

CLEAR AIR TURBULENCE OVER EUROPE

*G. S. HISLOP, Ph.D., B.Sc., A.R.T.C.,
A.F.R.Ae.S., M.I.Mech.E.*

MEASUREMENT OF JET ENGINE THRUST

BENGT JAKOBSSON, Dr.Sc.(Eng.), A.F.R.Ae.S.

86th ANNUAL REPORT OF COUNCIL 1950-1951

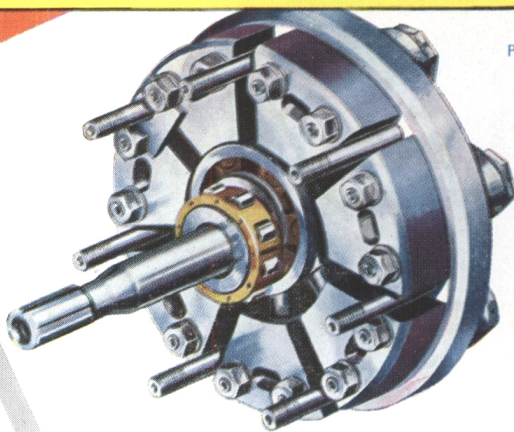
REVIEWS

CORRESPONDENCE

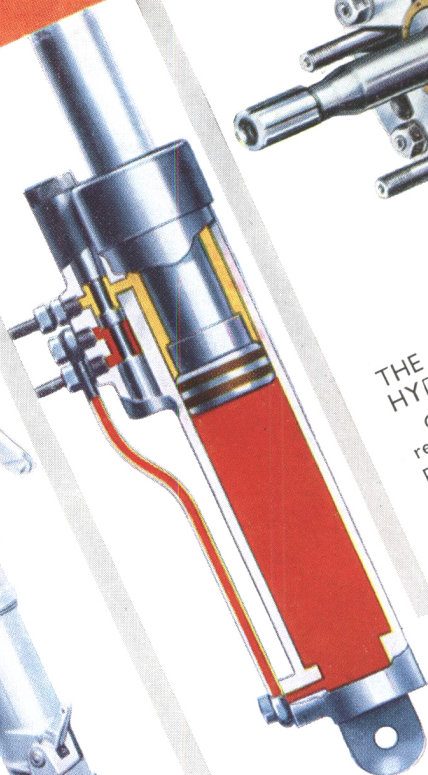
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ROYAL AERONAUTICAL SOCIETY, 4 HAMILTON PLACE, W.1

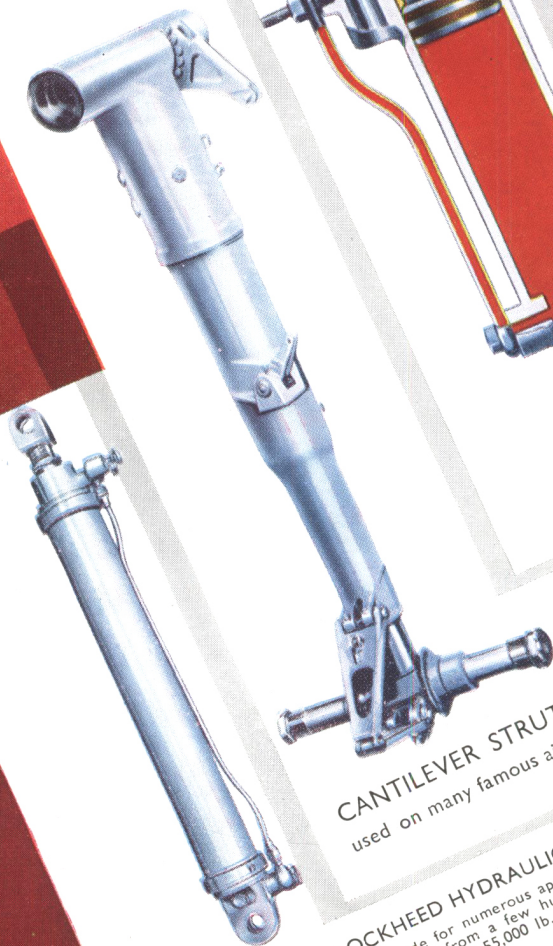
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Getting Cracking . . .

WE all know about oil. We've seen it on the movies. There's this fellow whatsisname—a Gary Cooper type—weary and lean-jawed, and there's a blonde in a check shirt in the offing. And one fine technicoloured day, after years and years of failure, privation and squalor . . . whoops! Up she comes. There he is, our hero—his rows of white teeth gleaming in blackened, oil-soaked features—running for a marriage licence. That's oil.

Well, isn't it? They pump the stuff from Nature's underground reservoirs, label it petrol, gasoline or juice and bury it again under garages and airports. They do the same with gold, don't they? Unearth it in South Africa and bury it at great expense on the other side of the world. Right?

Not quite; we're forgetting something. We're forgetting that crude oil is crude. We're forgetting chewing gum, candles, insecticides, explosives, inks, paints, synthetic rubber, diesel fuels, asphalt, lubricating oils, salves, creams, ointments, tractor fuels, jet fuels . . . motor spirit, AVIATION FUELS . . . and a thousand other things. No, the oil industry isn't merely a super transport organisation charged with the task of moving oil



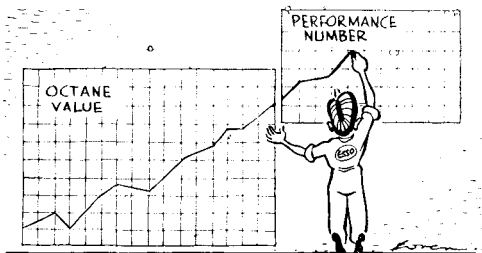
from well to consumer by means of fine fleets of tankers, tank cars and pipe-lines: it's a dozen industries in one, and its chief job is to convert crude oils into fuels of maximum efficiency for every type of engine.

Think of an octane number . . . double it . . . double it again. That's roughly what the industry's been up to these last few years. It has recently produced aviation fuels so high in anti-knock value that they ran right off the octane* scale and met up with a new yardstick, PN or Performance Number. And the work of tailoring fuels to fit engines and

* The octane or grade number of a fuel is simply the measure of its ability to resist detonation. The more compression a fuel can withstand without knocking when fired in the cylinder of an engine the higher its octane rating.

engines to fit fuels goes on, and on. The engineers, scientists, technologists and physicists of the oil industry sit in their laboratories and think of a performance number . . . double it. . . .

No, it's not just a matter of emptying wells and filling pumps.



What is the oil industry doing in Britain? Answer—the biggest job in its history. What are ESSO doing? Answer—their biggest job ever. In this country we're now using about seventeen million tons of oil products a year. Nearly all of this oil is imported—from the Caribbean and increasingly from the Middle East—and half of it was refined overseas. But soon, two years from now, when the industry's £125,000,000 building programme has been largely completed, the country will be independent of refineries abroad.

Production at British refineries and cracking plants will be something like twenty million tons of petroleum products a year. *It was three and a half million in 1948.*

One single unit of the industry will be responsible for more than a quarter of this vast output—Esso's giant refinery, now half built, at Fawley, near Southampton. This plant, built and financed entirely by private enterprise, is now expected to go "on stream" towards the end of 1951 with an ultimate annual output of over 6,000,000 tons of petroleum products.

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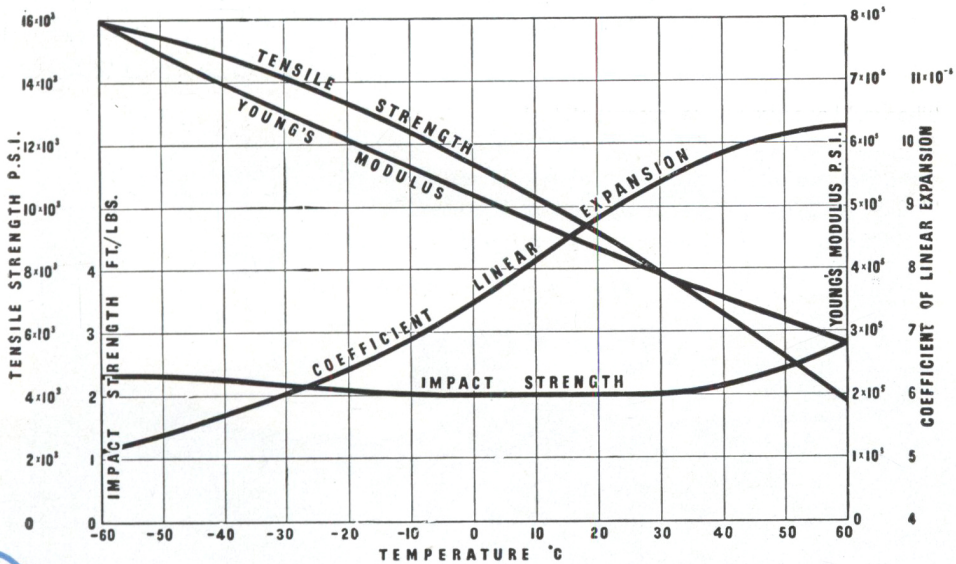
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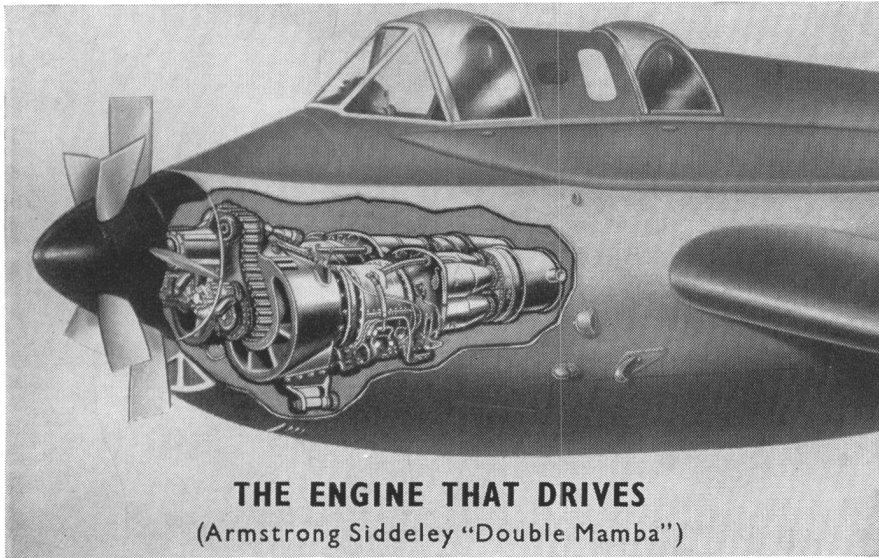
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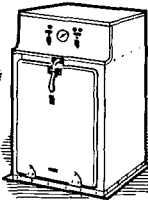
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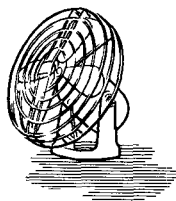
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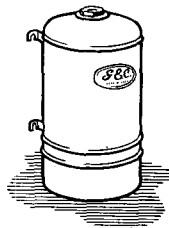
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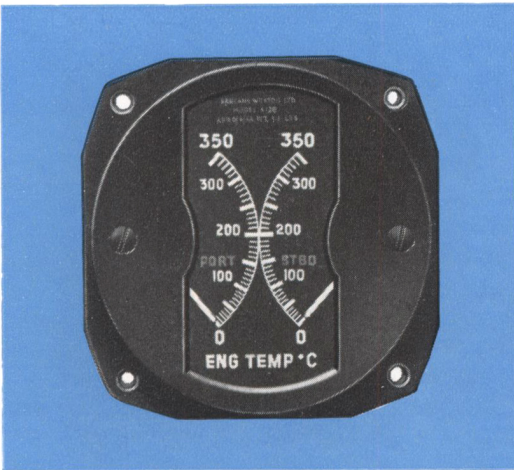
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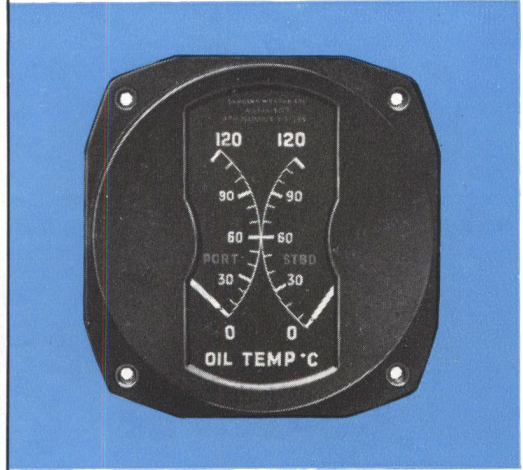
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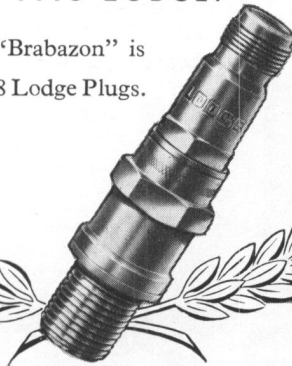
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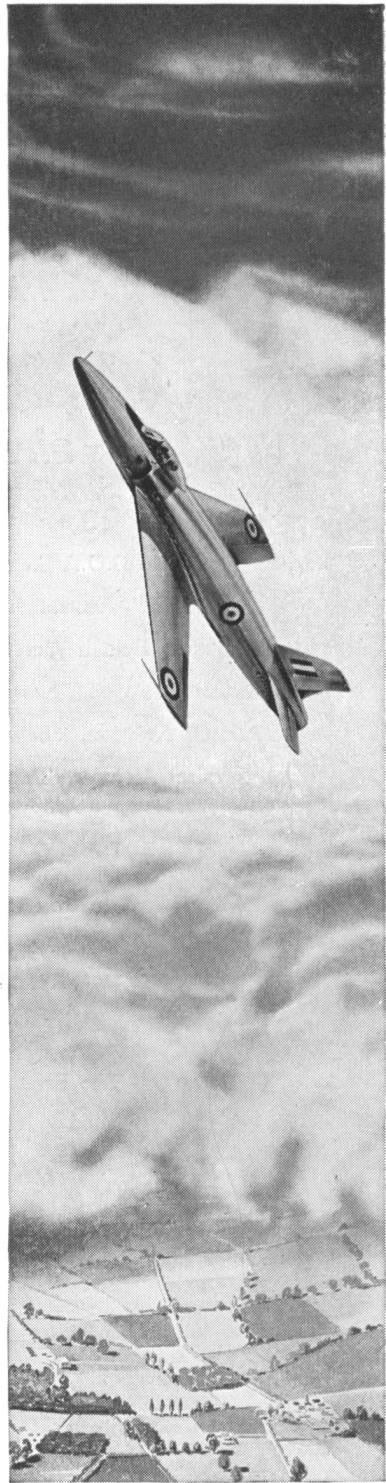


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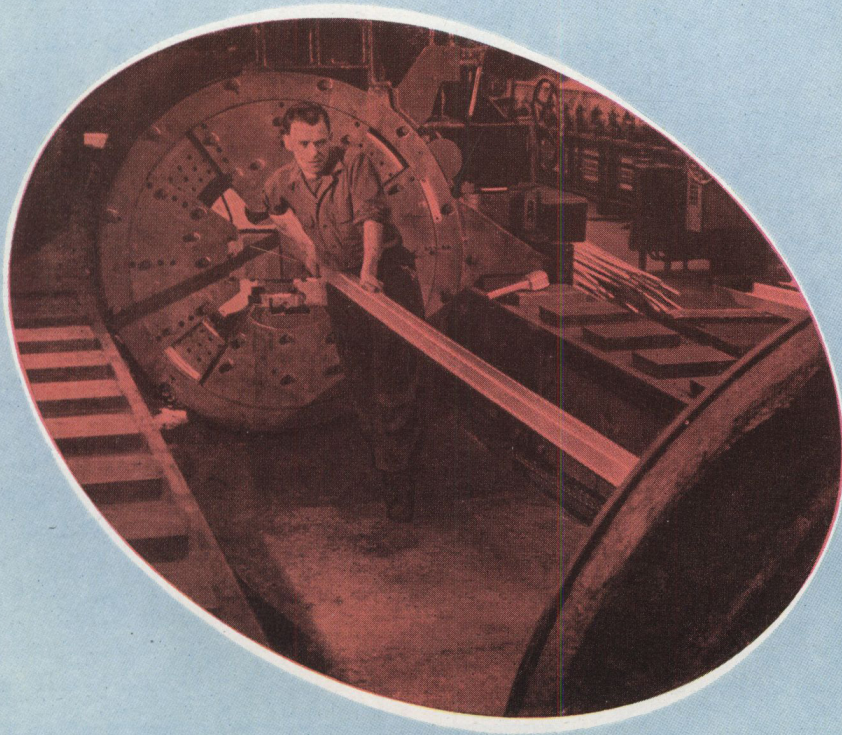
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