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50 PER CENT
GROUPEMENT TURBOMECA-SNECMA GRTS
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industrial turbine manufacture. 196!) corporate sales up at
Fr289 million, £22 million. Employees 4,200.
Turbomeca is leading design, development and manufactur-ing organisation in Europe for small aircraft turbines, more
than 10,000 of which have been built by the company and its
licensees, in particular Teledyne CAE in the US. From manu-facture of some 770 engines in 196!), production last year was
scheduled to have risen to around 1,000 units including joint
manufacture with Rolls-Royce of Turbomeca Astazou and
Turmo turboshafts for the Anglo-French helicopter pro-gramme and the Rolls-Royce Turbomeca Adour turbofan (with
Snecma) for the Jaguar programme.
Other production activities of varying strengths include
Marbore turbojets, Bastan and Astazou turboprops, and
Artouste, Astazou and Turmo turboshafts. Developments pro-grammes include Astafan and Bastafan turbofans, the TR 281
turbojet, uprated Astazou turboprops, and Turmastazou turbo-shaft, in all comprising a very diverse programme of work.
The company will also participate in joint production of the
Turbomeca-Snecma M49 Larzac turbofan.
Exports in 1969 were close to 50 per cent of corporate turn-over with virtually all overseas sales relating to engines for
Aerospatiale helicopters which arc powered exclusively with
Turbomeca turboshafts. Despite current rising success, com-petition is being increasingly experienced from American
companies expanding into the small engine sector, resulting
in growing Turbomeca reliance on European (in particular
French) applications.
Representative applications: Dassault MD320 Hirondelle
2XAstazou XVI (1,088 e.h.p., 811kW). Nord 262 Scries C, 2X
Bastan VIIA (1,045 s.h.p., 779kW). Aerospatiale SA341 Gazelle,
1 XAstazou HIN (592 s.h.p., 441kWl. Aerospatiale SA321 Super
Frelon, 3XTurmo IIIC, (1,480 s.h.p., l,104kW). Aerospatiale SA
3160 Alouette III, lXArtouste IIIB (578 c.h.p., 431kW).
GROUPEMENT TURBOMECA-SNECMA GRTS
M49 Larzac\
turbofan I
2,3001 b-5,400lb/
M61
turboshaft
2,500-3,000 s.h.p.
TURBOMECA-SNECMA
Groupement Turbomeca-Snecma GRTS. Headquarters: Parte.
Joint management group formed as result of agreement in
1967 for economic collaboration between Turbomeca and
Snecma.
Comprising small secretariat responsible for management of
collaborative ventures by Turbomeca and Snecma, most im-portant of which is M49 Larzac turbofan of 2,3001b, 10.4kN
rising to 5,4001b, 24.5kN with afterburning, being developed
by Snecma for joint manufacture by Turbomeca and Snecma.
Major application is Dassault-Breguet/Dornier Alpha-Jet
Franco-German trainer, with Dassault Falcon 10 and Aero-spatiale SN600 Corvette as commercial outlets. The M61
2,500 s.h.p. 1,860kW to 3,000 s.h.p. 2,240kW turboshaft deriva-tive is under study.
INDIA
HAL
Hindustan Aeronautics Ltd. Headquarters: Bangalore.
National corporation engaged in aircraft and aero-engine
manufacture. 1969 corporate sales up at Rs6'72.3 million,
£37.4 million.
With aero-engines representing the smaller part of its
activities. HAL is the sole aircraft turbine manufacturer in
INDIAN GOVERNMENT
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51 PER CENT,
ISRAELI GOVERNMENT
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BET-SHEMESH ENGINES LTD
Sub-contract manufacture \
of Turbomeca components J