

CPC COOPERATIVE PATENT CLASSIFICATION

F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING (NOTE omitted)

ENGINES OR PUMPS

F02 COMBUSTION ENGINES (cyclically operating valves therefor, lubricating, exhausting, or silencing engines F01); HOT-GAS OR COMBUSTION-PRODUCT ENGINE PLANTS

F02W INDEXING SCHEME RELATING TO TURBINES; GAS TURBINES

NOTE

This subclass constitutes an internal scheme for indexing only, associated with subclasses [F01D](#), [F01K](#), [F02C](#) and [F02K](#), relating to turbines and gas turbines

- 2746/00** Indexing scheme associated with former IdT class **46F**
- 2746/00006 . Turbines; Gas turbines
 - 2746/00013 . . Turbines with combustion chamber whose inlet and outlet open and close periodically; Explosion turbines
 - 2746/00019 . . Methods for improving the efficiency, special cycles, refrigeration by means of turbines, gas turbine plants with heat pumps (**R02C746/00F8 takes precedence**), indirect heating by circulation of an auxiliary fluid ([gas turbine plants comprising separators for ashes consisting of matters put in circulation and being used at the same time for heat transfer R02C746/00F30N](#))
 - 2746/00026 . . . using combustion gas, gas turbines functioning by means of exhaust gas
 - 2746/00032 . . . using magnetohydrodynamic generators
 - 2746/00039 . . Turbines with special provisions for the compression of fuel gas or of its components, plants in which the compressor and the turbine form a unit, groups of compression of charge or complement for gas turbine cycles, compression by shock waves ([burners with pulsatory combustion R02C746/00F1, R02C746/00F30N6](#))
 - 2746/00046 . . . Compression in the rotor for the turbine blades, turbines also functioning as compressor, cell compressors ([plants with cellular wheel R02C746/00F40A](#))
 - 2746/00052 . . Turbines using a single driven special gas, use of catalysts, use of oxyhydric gas or detonating gas, use of air or liquid oxygen, using of gas generating cartridges, use of compressed air tanks, air turbines, provisions for preventing the formation of snow or frost in the turbine, turbines for hand-held tools
 - 2746/00059 . . Turbines using mixtures of gas and steam as driving medium, also if the gas and steam currents only mix after the turbine, water injection
 - 2746/00065 . . Turbines using an auxiliary liquid
 - 2746/00072 . . . the auxiliary liquid making a to-and-fro movement
 - 2746/00078 . . . the auxiliary liquid being circulated in a close circuit
 - 2746/00085 . . Turbines using several gases or steams with separate action (**R02C746/00F13 takes precedence**)
 - 2746/00092 . . Turbines other than those according to groups **R02C746/00F1 - R02C746/00F15**, counter-rotating turbines
 - 2746/00098 . . . Turbines using fluid friction
 - 2746/00105 . . . Special kinds of reaction turbines; Turbines with blades having channels passing through the rotor
 - 2746/00111 . . . Explosion turbines, i.e. internal combustion
 - 2746/00118 . . . Turbines with saw-tooth or ratchet-wheel shaped rotor
 - 2746/00125 . . . Propeller and similar turbines driven by reaction, e.g. fluids issuing from the rotor
 - 2746/00131 . . . Turbines with radial entry ([gas turbines driven by exhaust gas R02C746/00F5A](#))
 - 2746/00138 . . Cooling
 - 2746/00144 . . . Cooling of gas; Cooling of oil
 - 2746/00151 . . Components and control; Inversion of rotation; Turbines with forward and reverse rotation
 - 2746/00157 . . . Blades and blade carrying members
 - 2746/00164 Turbine rotors, e.g. multistage; Assembly; Shafts
 - 2746/00171 . . . Safety and control devices; Test benches
 - 2746/00177 . . . Starting devices, e.g. quick-starting devices
 - 2746/00184 using starting cartridges
 - 2746/0019 . . . Elements specifically intended for combustion turbines, pulverulent and solid fuel turbines; Separation of ashes
 - 2746/00197 Fuel supply and feeding devices, e.g. pre-processing of fuel, pumps, valves, draining of the fuel system
 - 2746/00203 Combustion chambers with admission valves, control, scavenging and filling
 - 2746/0021 . . Plants with specific use of turbines; Construction of power stations with gas turbines
 - 2746/00217 . . . Plants comprising a turbine of a special kind, plants with cellular wheel; Grouping of the various parts of a plant
 - 2746/00223 . . . Turbo-compressor plants for providing compressed air or gases, hot gases or steam, control of these plants
 - 2746/0023 . . . Propulsion plants, e.g. marine turbines

- 2746/00236 Turbine plants for gas-turbine locomotives
- 2746/00243 Control of the gas turbines in propulsion plants, e.g. for ships or turbo-propulsion
([control of gas turbines in general](#)
R02C746/00F30, [control of fuel supply](#)
R02C746/00F45 - **R02C746/00F48**)
- 2746/0025 Gas turbine plants for marine propulsion
- 2746/00256 . . . Turbines supplied by other gas generators than those consisting in a combination of combustion chambers and axial or centrifugal compressors
- 2746/00263 Turbines supplied by piston gas generators
- 2746/00269 Plants consisting of pistons gas generators, e.g. with free pistons bringing a driving gas to separately assembled turbines, control of such plants
- 2746/00276 Plants consisting of a piston gas generator forming a unit with a turbine
- 2746/00282 Turbines supplied by other gas generators than those according to group
R02C746/00F40D1
- 2746/00289 . . Control systems for the fuel supply to the combustors of gas turbines plants ([control of gas turbines in general](#) **R02C746/00F30A**, [control of gas turbines in propulsion plants except for the jet propulsion](#) **R02C746/00F40C2**, [fuel supply systems](#) **R02C746/00F30N1**)
- 2746/00296 . . . using a fuel pump with adjustable flow
(**R02C746/00F45C** - **R02C746/00F45F** take precedence)
- 2746/00302 with control according to one parameter
- 2746/00309 with control according to one or several speeds
- 2746/00315 with control according to one or several pressures
- 2746/00322 with control according to one or several temperatures
- 2746/00328 with control according to two parameters
- 2746/00335 with control according to one or several speeds and of one or several pressures
- 2746/00342 with control according to one or several speeds and of one or several temperatures
- 2746/00348 with control according to one or several pressures and of one or several temperatures
- 2746/00355 with control according to at least three parameters
- 2746/00361 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/00368 . . . using a fuel pump with adjustable flow and at least one adjustable valve between pump and burners (**R02C746/00F45F** takes precedence)
- 2746/00375 with control according to one parameter
- 2746/00381 with control according to one or several speeds
- 2746/00388 with control according to one or several pressures
- 2746/00394 with control according to one or several temperatures
- 2746/00401 with control according to two parameters
- 2746/00407 with control according to one or several speeds and of one or several pressures
- 2746/00414 with control according to one or several speeds and of one or several temperatures
- 2746/00421 with control according to one or several pressures and of one or several temperatures
- 2746/00427 with control according to at least three parameters
- 2746/00434 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/0044 using a fuel pump with adjustable flow and at least one adjustable by-pass valve
(**R02C746/00F45F** takes precedence)
- 2746/00447 with control according to one parameter
- 2746/00453 with control according to one or several speeds
- 2746/0046 with control according to one or several pressures
- 2746/00467 with control according to one or several temperatures
- 2746/00473 with control according to two parameters
- 2746/0048 with control according to one or several speeds and of one or several pressures
- 2746/00486 with control according to one or several speeds and of one or several temperatures
- 2746/00493 with control according to one or several pressures and of one or several temperatures
- 2746/005 with control according to at least three parameters
- 2746/00506 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/00513 . . . using a fuel pump with adjustable flow and at least one adjustable valve between pump and burners, and also at least one adjustable by-pass valve
- 2746/00519 with control according to one parameter
- 2746/00526 with control according to one or several speeds
- 2746/00532 with control according to one or several pressures
- 2746/00539 with control according to one or several temperatures
- 2746/00546 with control according to two parameters
- 2746/00552 with control according to one or several speeds and of one or several pressures
- 2746/00559 with control according to one or several speeds and of one or several temperatures
- 2746/00565 with control according to one or several pressures and of one or several temperatures
- 2746/00572 with control according to at least three parameters
- 2746/00578 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/00585 . . . using a fuel pump with non-adjustable flow and at least one adjustable valve between pump and burners (**R02C746/00F45J** takes precedence)
- 2746/00592 with control according to one parameter
- 2746/00598 with control according to one or several speeds

F02W

- 2746/00605 with control according to one or several pressures
- 2746/00611 with control according to one or several temperatures
- 2746/00618 with control according to two parameters
- 2746/00625 with control according to one or several speeds and of one or several pressures
- 2746/00631 with control according to one or several speeds and of one or several temperatures
- 2746/00638 with control according to one or several pressures and of one or several temperatures
- 2746/00644 with control according to at least three parameters
- 2746/00651 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/00657 . . . using a fuel pump with non-adjustable flow and at least one adjustable by-pass valve (**R02C746/00F45J takes precedence**)
- 2746/00664 with control according to one parameter
- 2746/00671 with control according to one or several speeds
- 2746/00677 with control according to one or several pressures
- 2746/00684 with control according to one or several temperatures
- 2746/0069 with control according to two parameters
- 2746/00697 with control according to one or several speeds and of one or several pressures
- 2746/00703 with control according to one or several speeds and of one or several temperatures
- 2746/0071 with control according to one or several pressures and of one or several temperatures
- 2746/00717 with control according to at least three parameters
- 2746/00723 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/0073 . . . using a fuel pump with non-adjustable flow, at least one adjustable valve between pump and burners, and at least one adjustable by-pass valve
- 2746/00736 with control according to one parameter
- 2746/00743 with control according to one or several speeds
- 2746/0075 with control according to one or several pressures
- 2746/00756 with control according to one or several temperatures
- 2746/00763 with control according to two parameters
- 2746/00769 with control according to one or several speeds and of one or several pressures
- 2746/00776 with control according to one or several speeds and of one or several temperatures
- 2746/00782 with control according to one or several pressures and of one or several temperatures
- 2746/00789 with control according to at least three parameters
- 2746/00796 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/00802 . . . Components and parts of control systems according to **R02C746/00F45B - R02C746/00F45J**
- 2746/00809 with control according to one parameter
- 2746/00815 with control according to one or several speeds
- 2746/00822 with control according to one or several pressures
- 2746/00828 with control according to one or several temperatures
- 2746/00835 with control according to two parameters
- 2746/00842 with control according to one or several speeds and of one or several pressures
- 2746/00848 with control according to one or several speeds and of one or several temperatures
- 2746/00855 with control according to one or several pressures and of one or several temperatures
- 2746/00861 with control according to at least three parameters
- 2746/00868 with control according to one or several speeds, of one or several pressures and of one or several temperatures
- 2746/00875 Construction of adjustable valves
- 2746/00881 . . . Control systems for the fuel supply to the main burners as well as to the after-burners of a single gas turbine, or with regulation of another adjustable component of the gas turbine (**control systems for the fuel supply only to the main burners or only to the after-burners R02C746/00F45, R02C746/00F48**)
- 2746/00888 . . . of additional fuel injection between the after-burners to ignite them, e.g. "hot-shot", programming devices for the ignition of after-burners
- 2746/00894 . . . of the fuel supply to the main burners and to the after-burners (**R02C746/00F46G takes precedence**)
- 2746/00901 . . . of the fuel supply to the main burners and to the nozzle (**R02C746/00F46G takes precedence**)
- 2746/00907 . . . of the fuel supply to the after-burners and to the nozzle (**R02C746/00F46G takes precedence**)
- 2746/00914 . . . of the fuel supply to the main burners, to the after-burners and to the nozzle
- 2746/00921 . . . of the fuel supply to the main burners and of the adjustable stator vanes of the gas turbine
- 2746/00927 . . . Systems for controlling the fuel supply to the injectors and a variable-pitch propeller driven by the gas turbine
- 2746/00934 . . . Systems for controlling the fuel supply to the injectors and the by-passing of the driving fluid
- 2746/0094 . . . Systems for controlling the fuel supply to the burners of gas turbine plants not foreseen in **R02C746/00F45 or R02C746/00F46**
- 2746/00947 . . . specially adapted to the use of a special fuel or a plurality of fuels
- 2746/00953 . . . using two pumps or more
- 2746/0096 . . . for the combined control of two gas turbine plants or more
- 2746/00967 . . . for dividing the fuel between the main burners or between the after-burners of a single gas turbine (**division of fuel between main burners and after-burners R02C746/00F46**)

F02W

- 2746/00973 . . . specially adapted for aircraft gas turbine engines, in which the control is a function of the speed of the aircraft; Mach number control, optimisation of fuel consumption
- 2746/0098 . . . Control systems provided with an additional control system which can take over in case of a breakdown of the normal system, safety devices
- 2746/00986 . . . specially adapted for gas turbine plants with intermittent fuel injection
- 2746/00993 . . . Mechanical control devices linked to the throttle lever