

# Thales Group: Chemical Propulsion Engineer

[https://www.glassdoor.co.uk/Job/thales-jobs-SRCH\\_KE0,6.htm](https://www.glassdoor.co.uk/Job/thales-jobs-SRCH_KE0,6.htm)

Location: Oxford, United Kingdom

Thales people architect and deliver satellite-based systems that help position, connect and observe our planet, and push the boundaries of our understanding of planet's resources. Our systems are in orbit at 400 km, 20000 km, 36000 km and beyond to the edges of the solar system.

Together we offer fantastic opportunities for committed employees to learn and develop their career with us. At Thales UK, we research, develop, and supply technology and services that impact the lives of millions of people each day to make life better, and keep us safer. We innovate across five major industries; Aerospace, Defence, Ground Transportation, Security and Space. Your health and well-being matters to us and that's why we offer you the flexibility to do what's important to you; whether that's part time hours, job sharing, home working, or the ability to flex your start and finish times. Where possible, we support a working pattern that suits your lifestyle and helps you reach your ambitions.

## **Principal Purpose of the Position:**

Working as part of the Thales Alenia Space UK Propulsion Engineering Team:

Work with a team of talented and passionate engineers to tackle difficult problems and push the boundaries of in-space propulsion;

Take responsibility for the chemical propulsion equipment selected for the subsystem i.e monopropellant/bi-propellant thrusters, liquid propellant tanks, fluidic components and technical follow-up with suppliers for the equipment qualification and procurement.

Support propulsion architects and subsystem technical leads with technical document preparation for projects, studies and bids;

Provide technical input to future propulsion developments and contribute to continuous improvement of our products, systems and processes.

## **Principal Relationships:**

Propulsion Engineering Manager, Propulsion Design Authority and propulsion technical skill leaders

TAS satellite teams and technical experts

Propulsion equipment suppliers

External partners & customers, eg ESA, UKSA, satellite operators.

## **Key Responsibilities and tasks**

Provide technical input to the design and development of new chemical propulsion subsystems for TAS satellites/product lines. This will include, but not be limited to; Managing the technical requirements specification (URD) for chemical propulsion equipment and interface with the equipment supplier/s

Evaluating supplier proposal reviews in TEBs and supporting propulsion equipment definition and selection;

Preparing technical documentation for the solution through the different project life cycle milestones & reviews (PDR, CDR, QR etc)

Interpreting mission/customer specific and generic system level requirements and establishing baseline technical requirements for the propulsion subsystem  
Support to propulsion subsystem fluidic analyses and preparation of analysis reports for subsystem PDR/CDR data packs  
Prepare AIT plans and test requirements for the subsystem.  
Perform subsystem engineering tasks with support from technical experts in other disciplines (eg Mechanical, thermal, AOCS)  
Perform ad-hoc additional duties that will arise from time to time that are consistent with the nature of this position

#### Qualifications, Skills & Experience;

The following are considered essential for this role:

Degree level qualification in a discipline associated with Space Engineering (such as aerospace/astronautics/mechanical engineering) or related subjects (such as physics).  
Post-graduate research in a subject field related to propulsion would be desirable  
Demonstrated knowledge of state of the art chemical thrusters and associated subsystem architecture (primarily monopropellant hydrazine and bipropellants MON/MMH).  
Experience in design of subsystems using low toxicity or 'Green' alternative propellants, such as HTP, ADN or HAN would be advantageous.  
Demonstrated knowledge/experience in space projects at different stages of the lifecycle from Phase 0/A to Phase D/E.  
Experience of collaborating in a multi-discipline and international team environment  
Proven experience and proficiency in mathematical tools such as Excel/MATLAB.  
Good working knowledge of the thermodynamic properties of liquid propellants and pressurant gasses.

The following are considered desirable for this role:

Previous experience in design and test of in-space chemical thrusters, liquid rocket engines or subsystems  
Systems engineering knowledge – across the “Systems V” – to achieve critical project outcomes to time, cost and quality;  
Good communication and influencing skills to build productive relationships with colleagues and stakeholders;  
While specific knowledge of the French and Italian languages is not a prerequisite for this position it would be advantageous to facilitate activities across the TAS JV organisation.

#### Expected Behaviours

Display energy, drive, agility and resilience in achieving work-related goals under difficult circumstances;  
Developing and performing through teamwork, and promoting improvements and change;  
Ability to communicate well and influence effectively at all levels internally and externally with customers, partners and suppliers;  
The ability to work innovatively with sometimes-unclear briefs; a persistent and tenacious high achiever, with the ability to quickly adapt and learn new skills and concepts;  
Be 'customer focused' to ensure that the needs of the customers are met;  
The job requires a flexible and “can do” approach to perform effectively in a fast changing business growth environment and a willingness to “go the extra mile” to

achieve results when required.

Demonstrate behaviours that contribute to an agile and collaborative operating model, “One Team – One Company”

In line with Thales' Baseline Security requirements, candidates will be asked to provide evidence of identity, eligibility to work in the UK and employment and/or education history for up to three years. Some vacancies may require full Security Clearance which can require further evidence to be provided. For further details of the evidence required to apply for Baseline and Security Clearance please refer to the Defence Business Services National Security Vetting (DBS NSV) Agency.

At Thales we provide CAREERS and not only jobs. With Thales employing 80,000 employees in 68 countries our mobility policy enables thousands of employees each year to develop their careers at home and abroad, in their existing areas of expertise or by branching out into new fields. Together we believe that embracing flexibility is a smarter way of working. Great journeys start here, apply now!