Careers Kit

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The aim of the Careers Kit is to promote and disseminate the numerous jobs and career opportunities in the Aerospace Sector among youngsters, providing career-counselling materials for both children/youngsters and adults (teachers, other education support staff and parents/tutors) and promoting stronger interaction between industry and schools.

This Kit will include dynamic information regarding aerospace jobs and the necessary training/education to achieve it. This information will be supported with employment statistics within the sector, professionals' testimonials, tasks examples, related working conditions, among others.

FLY TO THE AEROSPACE SECTOR...

Which route
will you take?

Aircraft design or aircraft maintenance?
Passenger handling or air traffic controller?

With many factors to take into consideration, check in for the possible journeys in the aeronautics or air transport field, getting a chance to explore the sector statistics and curiosities.

The Careers Kit will include information regarding job positions and necessary training and education to achieve it with advice and tips along the way.

The Aerospace/Defense Industry serves, as its name represents, two main markets: Aerospace, which largely comprises the production, sale, and service of commercial aircraft, and Defense, which is dependent on the nation's need for military weapons and systems designed to operate on land, sea, and in the air.

The Careers Kit will focus on the aerospace sector which can be divided into two major areas:

- **aeronautics industry;**
- **air transport.**

Did you know aeronautics and air transport is not only about Pilots and Cabin Crew?

These two areas involve lots of different jobs, from career paths requiring master studies (such as Aviation Meteorologist) to others demanding only secondary level combined with different small specialization courses (such as Flight Dispatcher).

Also, did you know the jobs in the aeronautic industry have a very interdisciplinary character?

Professionals working in the aeronautics industry are not directly trained for aviation, but instead specialized, meaning that, for instance, a CNC operator can move any time to the automotive industry or other related.

Aerospace leads in the development and application of innovation in both product and process. With the overriding duty of safety, aerospace as a sector has a mature and well-defined innovation methodology that makes it a **challenging and exciting field to work in**.

Some **innovative projects related to the Industry 4.0 in Aeronautics** are:

- **3D/Design applications:** Advances in 3D technologies have brought innovations in the aeronautics manufacturing industry. Virtual reality and augmented reality have extended 3D design capabilities. They allow 3D design and associated engineering solutions to be used throughout the whole manufacturing process and help to reduce production cost and to increase flexibility and efficiency
- **Internet of Things (IoT) applications:** The deployment of connected objects is transforming the aeronautics industry and the manufacturing process. The European industry has to invest both in technology and skills to sustain its position in a global market.

Also, **in-flight entertainment and communication has been a focus of innovation**. Up until recently, the aeronautical communications market was still limited to operational communications between aircraft cockpits and control towers. It is now expanding by integrating data communications for passengers and increasing coverage to a global level.

1. AERONAUTICS INDUSTRY

According to the European Commission, Aeronautics is one of the EU's key high-tech sectors on the global market:

- the EU is **a world leader in the production of civil aircraft**, including helicopters, aircraft engines, parts and components;
- the EU has a **trade surplus for aerospace products**, which are exported all over the world.

The European aeronautics industry develops and manufactures **civil and military aircrafts, helicopters, drones, aero-engines** and **other systems and equipment**. The industry work involves: **designing components and systems and generating CAD models and drawings**; work such as **fluids analysis or thermal analysis**; **manufacturing the technology**, **developing and testing it**; and **supporting the products in service.**

Big manufacturing companies include **Airbus, Boeing and Bombardier**, who design, manufacture and build aircraft, and **Rolls-Royce, General Electric and Pratt and Whitney**, who design, manufacture and build engines. **Safran Landing Systems, Cobham and QinetiQ** are other big names. There is a large network of smaller suppliers who support the big companies.

Productivity is considerable and despite high employment costs, the sector is **quite profitable**. A sizeable share of value added is spent on **research and development** (R&D), which is reflected in an increasing number of patent applications (European Commission).

Employment

According to the AeroSpace and Defence Industries Association of Europe (ASD), employment in ASD Industries reached 543,000 direct units in 2016. Specifically, aeronautics provides more than 540,000 jobs and generated a turnover of close to EUR 150 billion in 2016 (ASD, FACTS&FIGURES, 2017).

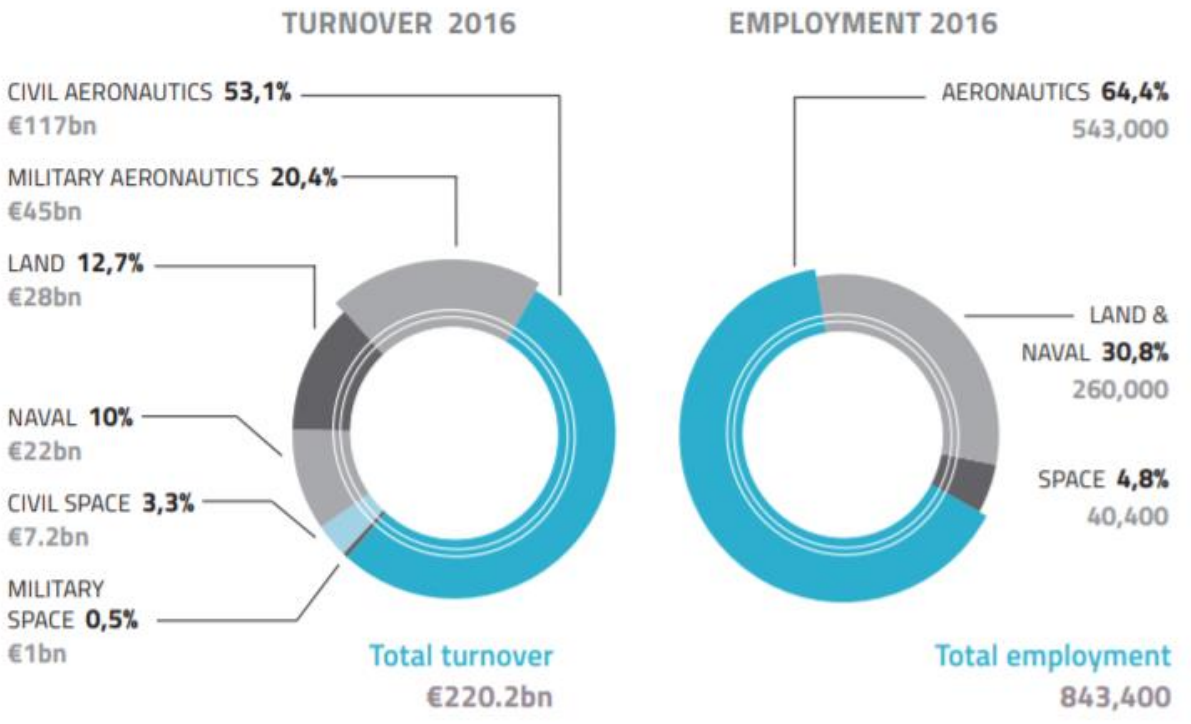


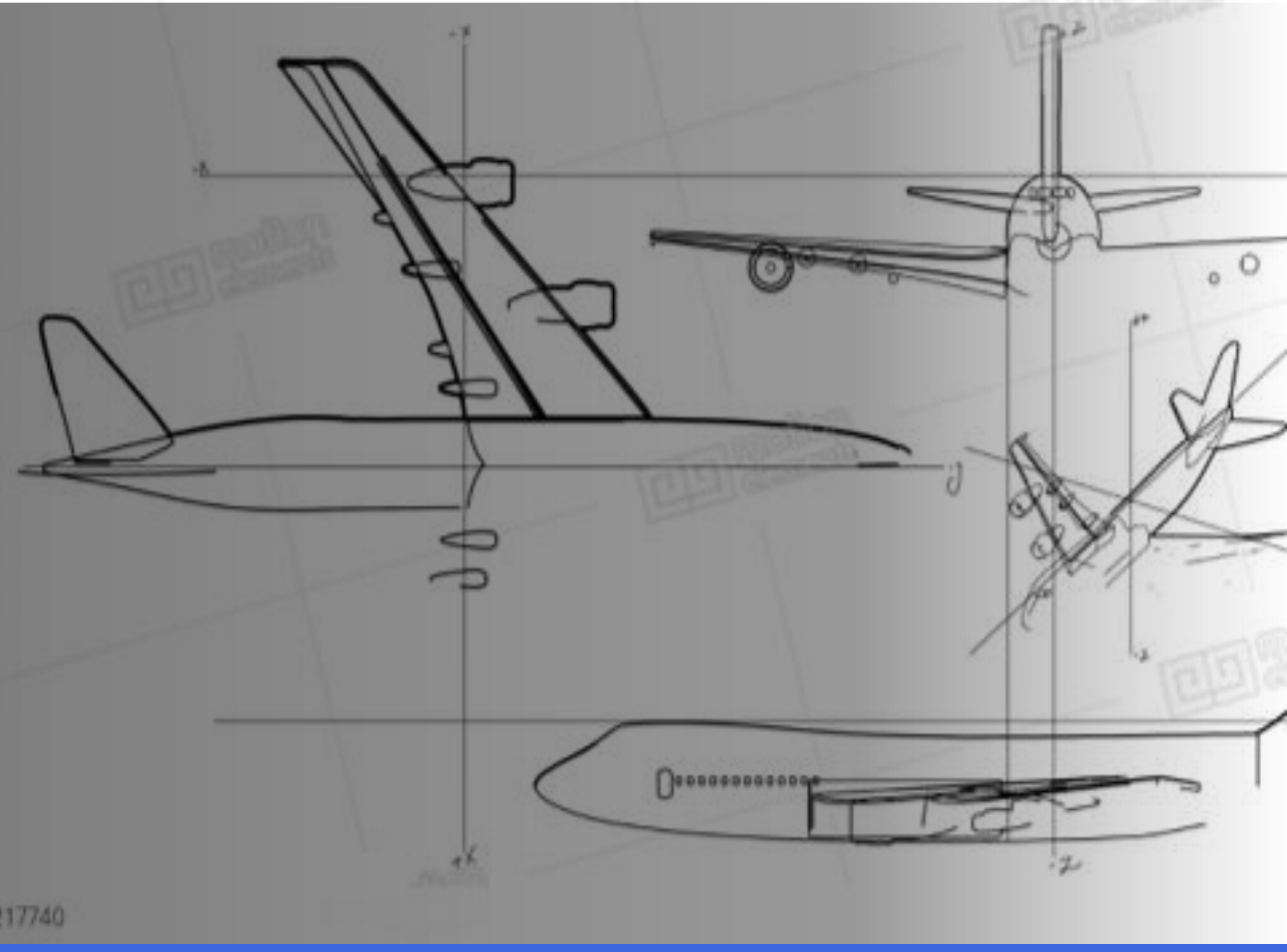
Figure 1. Aerospace and Defence 2017 Employment Breakdown
Source: AeroSpace and Defence Industries Association of Europe

The industry is highly concentrated, both geographically (in particular EU countries) and in terms of the few large enterprises involved. Employment in the aerospace sector is **particularly significant in the United Kingdom, France, Germany, Italy, Spain, Poland and Sweden.**

Needs and tendencies

Aerospace engineers will be a promising career, not only because of the estimated global demand for new passenger airplanes, but also because of the rapid advancements in aerospace technology.

Also, **digital transformation** is a reality for A&D industry, so, besides a strong vision from the top management, attracting and retaining talent like **data scientists and software experts** will be key.



1.1 DESIGN

1.1.1 CAD/CAM TECHNICIAN

DUTIES AND TASKS

- Produces technical drawings;
- Works directly with design team;
- Responsibility for the control, correctness, accuracy of all drawings and models;
- Digital Mock Up;
- Makes the drawings for manufacturing.

CAREER PROSPECTS

Junior CAD/CAM technicians can progress to senior CAD/CAM technicians, team leaders and project management roles.

By later taking an engineering bachelor, CAD/CAM technician may become Design Engineers. Also, these technicians can work in a wide range of industries from engineering and construction to manufacturing.

WORK CONDITIONS

- Office Work;
- May need to visit noisy environments factory areas, or be based temporarily on site;
- Many hours by the computer.

HOW TO GET THE JOB?

Upper Secondary Level in CAD/CAM field; Level 4 EQF.

Although you don't need a master's degree, having a relevant master's in engineering or an engineering doctorate can enhance your career prospects.

1.1.1 CAD/CAM TECHNICIAN TESTIMONIAL

"10 years ago, when I started working, I was a young and inexperienced young man, without any knowledge of the business industry and how to evolve and have a relationship between co-workers, bosses and customers. I started my career as a CAD/CAM analyst. Designing, checking fixtures and aeronautical parts were freighting me back those days! But something inside me was happy and excited about this difficult work. Many times, the work in hands seems impossible to even begin! But I never give up and choose to face the challenges. My background in Mechanical Engineering gave me the tools to evolve and challenge myself. 10 years have passed since, and after many challenges, happy and sad moments in my professional live, I finally realize my long dream – to have my own company. "Love what you do, no matter what it is, and try to be the best at it"

João Glória
CEO/General Manager

Years of experience: 10 Years
Previous jobs: Department Manager, Project Manager, CAD/CAM Analyst
Education Background: Mechanical Engineering Degree

1.1.2 SIMULATION ENGINEER

DUTIES AND TASKS

- Be responsible for software architecture/design and development of new modeling;
- Develop Systems models and simulation products for internal and external clients;
- Tests the performance, durability, safety and functionality of engineering solutions in a virtual environment.

CAREER PROSPECTS

As you gain experience you may progress into a senior simulation engineer, get team leading responsibilities and eventually, you may work as project manager. Also, in general Aircraft Project Engineers can become a Quality Controllers or Process Engineers.

WORK CONDITIONS

- Computer Work;
- Simulation Environment.

HOW TO GET THE JOB?

Bachelor in in Mechanics, Aeronautics, Aerospace or Computer Engineering; Level 6 EQF. Although you don't need a Master's degree, having a relevant Masters in engineering or an engineering doctorate can enhance your career prospects.

1.1.2 SIMULATION ENGINEER TESTIMONIAL

"First, a key aspect that every professional that wants to pursue a career in Aeronautical Engineering should bet on is the investment in their own knowledge. If possible, still while doing their degrees, it is fundamental to know what area the job areas that they enjoy the most and try to get an in depth knowledge and know how on those particular subjects. They can do some research on which companies offer a job position in the areas they love and ask for an internship or try to obtain more information regarding what those companies are looking for in a candidate before they hire them.

Specifically for the Simulation area in Aeronautical Engineering, I think it is a fascinating job position that offers some very different tasks than what we were used to in the university. It is amazing to constantly have to multitask between programming, software development, building simulators, talk to different clients, build computers, try new machines and so on. In my case, I had the opportunity to work with on of the greatest leaders that any engineer could ever ask for the beginning of their careers".

Simão Lopes
Project Engineer - Simulation

Years of experience: 2 Years
Education Background: Aeronautical Engineering

1.1.3 AIRCRAFT PROJECT ENGINEER (STRUCTURES)

DUTIES AND TASKS

- Develops and implements projects for the design and construction of aircraft structures (eg. body, cabin, wings, etc);
- Creates structural engineering specifications using various metallic, non-metallic, and composite materials;
- Evaluates and interprets needs and problems, developing effective approaches to resolving those issues;
- Interfaces with all avionics systems including flight management, navigation, power, propulsion, fuel, and payloads;
- Research and development in the field of aeronautics.

CAREER PROSPECTS

As you gain experience you may progress into a senior Structural Project Engineer, get team leading responsibilities and, eventually, you may work as project manager. Also, in general Aircraft Project Engineers can become a Quality Controllers or Process Engineers.

WORK CONDITIONS

- Simulator Environment.

HOW TO GET THE JOB?

Bachelor's in aerospace, Aeronautics, Mechanics, Materials Engineering or related area; Level 6 EQF.
Although you don't need a Master's degree, having a relevant Masters in engineering or an engineering doctorate can enhance your career prospects.

1.1.4 AIRCRAFT PROJECT ENGINEER (AVIONICS)

DUTIES AND TASKS

- Develops and implements projects for the design and construction of aircraft avionics systems (electronics inside the aircraft);
- Evaluates and interprets needs and problems, developing effective approaches to resolving those issues;
- Interfaces with all avionics systems including flight management, navigation, power, propulsion, fuel, and payloads;
- Research and development in the field of aeronautics.

CAREER PROSPECTS

As you gain experience you may progress into a senior Avionics Project Engineer, get team leading responsibilities and, eventually, you may work as project manager or department director. Also, in general Aircraft Project Engineers can become a Quality Controllers or Process Engineers.

WORK CONDITIONS

- Exposed to loud sounds and noise levels that are uncomfortable;
- Ear and head protection or other protective gear as necessary;
- Usually share office space;
- Work both indoors and outdoors;
- Exact in performing the job;
- Rarely consult a supervisor before making decisions;
- Free to set most goals and priorities on their own;
- May travel to other work sites and to visit manufacturers.

HOW TO GET THE JOB?

Bachelor’s In aerospace, Electrical or Mechanical Engineering or related area; Level 6 EQF. Although you don't need a Master’s degree, having a relevant Masters in engineering or an engineering doctorate can enhance your career prospects.

1.1.5 AIRCRAFT PROJECT ENGINEER (ENGINES)

DUTIES AND TASKS

- Develops and implements projects for the design and construction of aircraft engines;
- Evaluates and interprets needs and problems, developing effective approaches to resolving those issues;
- Interfaces with all avionics systems including flight management, navigation, power, propulsion, fuel, and payloads;
- Research and development in the field of aeronautics;
- Carries out tests in acoustics and vibrations.

CAREER PROSPECTS

As you gain experience you may progress into a senior Engine Project Engineer, get team leading responsibilities and eventually, you may work as project manager or department director. Also, in general Aircraft Project Engineers can become a Quality Controllers or Process Engineers.

WORK CONDITIONS

- Nearly every day wear safety attire or protective gear;
- Usually works indoors;
- Are sometimes exposed to loud sounds and distracting noise levels;
- Team work;
- Exact in performing the job;
- Rarely consult a superior before making a decision or setting tasks and goals.

HOW TO GET THE JOB?

Bachelor’s In aerospace, Electrical or Mechanical Engineering or related area; Level 6 EQF. Although you don't need a Master’s degree, having a relevant Masters in engineering or an engineering doctorate can enhance your career prospects.

1.1.4 AIRCRAFT PROJECT ENGINEER (ENGINES) TESTIMONIAL

"While working I use a lot of knowledge from my studies in the field of construction, also construction of aircraft engines. After my first month of work, I can say that the most important thing from my studies is knowledge of technical drawing, technologies used in the construction of turbine engine units and knowledge of CAD software. Of course – you can't learn all which is required for the constructor's position only at the university, but you should not be discouraged because it takes only a few weeks to master it".

Arkadiusz Dąbek
Junior Construction Engineer

"As a Mechanical Engineer of Aircraft Engines, I moved in my career from design of various components of aircraft turbine engines to their service, which is what I am currently doing.

In my professional life I like to face real problems, which often have many different sources. This causes many challenges: from parts production, through its use to repair service.

Professional work also allows me to improve on what I have learned before as well as get to know and develop new solutions and technologies. Working in an aviation company also allows me to meet new people, cultures and ways of working in various corners of the world".

Michał Bratko
Mechanical Engineer of Aircraft Engines

1.1.6 STRESS ANALYSIS ENGINEER

DUTIES AND TASKS

- Analyses, tests and designs company products through the utilization of robust principles;
- Performs basic structural analysis using well defined analysis tools to develop the structural environment, characteristics and performance;
- Investigates failures and analyses improvements;
- Performs basic structural analysis to determine structural integrity (margins of safety), using classical techniques and tools;
- Creates strength check notes to document analysis;
- Provides inputs to formal documentation, to show compliance with the company's, customer and regulatory requirements.

CAREER PROSPECTS

As you gain experience you may progress into a senior Stress Analysis Engineer, get team leading responsibilities and eventually, you may work as project manager or department director.

WORK CONDITIONS

- Work with clients, engineering and manufacturing teams.

HOW TO GET THE JOB?

Bachelor in Mechanics, Aeronautics or Aerospace or Materials Engineering or related courses; Level 6 EQF. Although you don't need a Master’s degree, having a relevant Masters in engineering or an engineering doctorate can enhance your career prospects.

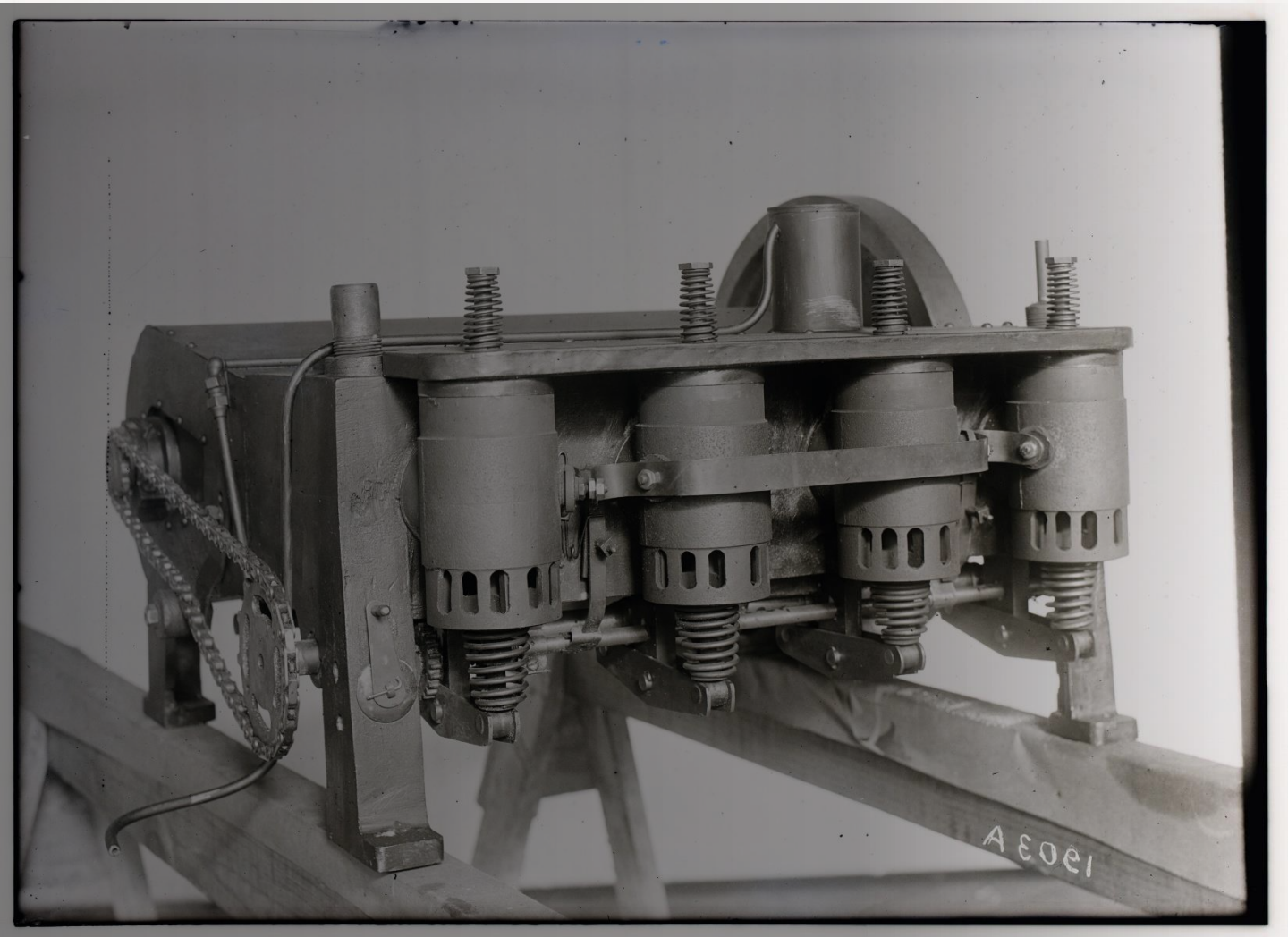
1.1.6 STRESS ANALYSIS ENGINEER TESTIMONIAL

"I was for many years Vibration test engineer at Active Space Technologies. My role was to conduct vibration tests on micro-satellites and satellite instruments, simulating conditions similar to those of a rocket launch with an Ariane 5, for example. Being a test engineer involves being responsible for a test machine (called a "shaker"), being responsible for its maintenance and making sure that the test requests sent by the customers are feasible with the experimental means at my disposal. Once the test is agreed, the satellite (or equipment to be tested) must be mounted, the accelerometers and instrumentation placed on the satellite, the test programmed (setting the expected acceleration levels), monitoring the test, analyzing the results, and transmitting them to the customer. What I like the most about this activity is "putting your hands in the dough", tinkering with my own hands on satellites or instruments that will fly on satellites, and seeing things that I have designed or helped to develop to be tested to the limits. Sometimes it even happens to see things starting! However, it is not always pleasant, we have to redo the designs and manufacture again, but in engineering we always learn from our mistakes".

João Ricardo

Project Manager @ Active Space Technologies

Years of experience: 10
Previous Occupations: Mechanical Engineer
Education Background: Mechanical Engineer (IST Lisboa, 2006), MBA (The Lisbon MBA, 2013)



1.2 MANUFACTURING

1.2.1 COMPOSITES TECHNICIAN

DUTIES AND TASKS

- Work with composite materials (fibre based);
- Uses manual or automatic technics and appropriate tools/machines that are basic for part production, e.g. cutting materials, installing insert, riveting, etc;
- Track, record and document work, materials, and products;
- Performs first level Quality inspection.

CAREER PROSPECTS

As you gain experience you may progress into a senior Composites Technician, get team leading responsibilities and, eventually, you may work as project manager or department director. Also, you can move to automobile and Formula1 industry.

WORK CONDITIONS

- Work in a plant in a production environment;
- Use protective equipment such as goggles and steel-toed boots;
- Work well in a team environment with other technicians to complete production objectives in a timely manner;
- Work independently with minimal supervision.

HOW TO GET THE JOB?

Upper Secondary Level (Level 4 EQF) or Post Upper Secondary Level (Level 5 EQF) in Aeronautic or Composites Production or related area. Although you don't need a Master's degree, having a relevant Masters in engineering or an engineering doctorate can enhance your career prospects.

1.2.1 COMPOSITES TECHNICIAN TESTIMONIAL

"I think that my job in the aviation industry is particularly interesting because I literally build airplane components with my own hands that will eventually end up in a 'real' airplane which is kind of mind-boggling when you think about it. When someone thinks about airplanes and how they are made, they probably think that every single component is made by a robot or a machine but there are some components that are made by hand, like the ones I make from composite materials by a process called 'hand lay-up' which basically means that I manually lay down individual layers of prepeg material and manipulate each layer into shape so that they can adhere to each other and to the mold without leaving air pockets between the layers. Another aspect that I think should be improved is the availability of specific education because I don't think that there are that many institutions that offer courses in this area. Obviously my education background is completely different but I think it helped me somehow. I think that if someone likes the aviation industry and would like to give it a go I think they should, although they must have in consideration that there are many methods and procedures they have to follow and that is a stressful environment, but nonetheless, I think it is an industry with a lot of future potential".

Helena Martinho

Composite lay-up technician

Years of experience: **One and a half year**
Previous jobs: **Call center operator, tourist guide, monitor of printmaking workshop**
Education Background: **Bachelor Degree in Fine Arts and Intermedia**

1.2.2 METALLURGIST

DUTIES AND TASKS

- Controls mechanical and metal forming processes;
- Designs and steers metallurgy processes;
- Develops and implement technologies and procedures for the extraction and processing of metals, their processing or merging;
- Supervises the process of using technologies in the area of manufacturing enterprises.

CAREER PROSPECTS

At the level of the metallurgist technician, you can become a press operator, machine tool and other equipment in the processes of metal production, processing and machining.
At the engineer level, as you gain experience, you can be promoted to the post of senior metallurgist, at the beginning as a leader, and then become the director of the entire department.

WORK CONDITIONS

- Team work;
- Indoor and laboratories work;
- Production sites that can be hot and noisy;
- Have to wear in some area's protective glasses and clothing; (occasionally)

HOW TO GET THE JOB?

Portugal, Spain: Bachelor in Mettalurgy, Mechanic or Materials Engineer or related area; Level 6 EQF.
Poland: Master of Sciences in Metallurgy or Level 6 EQF or higher

1.2.2 METALLURGIST TESTIMONIAL

"In my work I like the constant opportunity for development and atmosphere of the team. I was surprised by the rapid rhythm of work and changes of priorities - you have to make decisions dynamically. I would recommend such a career path due to continuous self-development and learning. The difficult part for me was that I have met a completely different reality than at a university - things in practice were very different from what I had learned in theory. But I have got through it thanks to my great colleagues who introduced me to my new duties. In my opinion, the most important stage of the educational path was the internship when I was prepared to perform my current duties. Therefore taking a metallurgist position was much easier because I have already known the specifics of work.
My experience with this industry is that when you get on a plane, you are a much more conscious passenger. You wonder whether you are flying by plane, in which there is some part that you had in your hands, with which you had a problem and which have solved.
The awareness of making one's small contribution to something that allows a person to be on the other side of the world in a few hours really attracts people to this industry".

Jadwiga Wilk
Metallurgist

"My job is to design and change technologies for heat and thermo-chemical treatment for aircraft engine parts. The aviation industry is a large and diverse working environment. It requires from you to focus, to be flexible and to be responsible. It is full of challenges, but you also would not be bored here.
I know that I am part of something huge and important, which affects the future of people. In addition, thanks to working in a place with so many departments and levels, everyone is able to find a place that interests him, but if you change your interests, you can are also able to find suitable place".

Joanna Czach
Junior Metallurgist

1.2.3 TECHNICIAN OF METAL TREATMENT

DUTIES AND TASKS

Prepares and carries out the tasks inherent in the various types of structure and surface treatment of metals, destructive and non-destructive tests on metal materials and parts associated with the aeronautical industry.

CAREER PROSPECTS

As you gain experience you may progress into senior technician of metal treatment.

WORK CONDITIONS

- Work in hangars and airfields;
- Noisy sometimes;
- May have to travel and work with chemicals;
- Possibly work by shifts.

HOW TO GET THE JOB?

Upper Secondary Level (Level 4 EQF) or Post Upper Secondary Level (Level 5 EQF) in Metal treatment or related fields. On-job-training.

1.2.4 PAINTERS

DUTIES AND TASKS

- Prepares surfaces and mixtures according to technical specifications;
- Executes painting and disinfection (chemical or manual) of aircraft;
- Prepares exterior surface of aircraft for painting;
- Performs masking, stripping, washing of aircraft sections and components;
- Selects, blends and mixes paints, inks and coatings to specifications;
- Paints aircraft interior, exterior and piece parts to engineering and customer specifications;
- Coats surface of parts, assemblies and finished products with protective or decorative materials;
- Verifies quality of work per appearance document and performs visual inspections of paint and equipment;
- Performs rework and touch-up painting.

WORK CONDITIONS

- Work in hangars and airfields;
- Work in hangars and airfields;
- Noisy sometimes;
- May have to travel and work with chemicals;
- Possibility to work by shifts;
- Operates mechanical lifts and elevated work platforms to access work.

HOW TO GET THE JOB?

Upper Secondary Level (Level 4 EQF) or Post Upper Secondary Level (Level 5 EQF) in Aeronautical Painting or related field.

1.2.5 COMPUTER NUMERICAL CONTROL (CNC) OPERATOR

DUTIES AND TASKS

- Operates numerically controlled machine tools;
- Produces machined parts by programming, setting up, and operating a computer numerical control (CNC);
- Maintains quality and safety standards;
- Keeps records, maintains equipment and supplies.

WORK CONDITIONS

- Work in production site;
- Medium level of noise;
- Possibility to work by shifts.

HOW TO GET THE JOB?

Upper Secondary Level (Level 4 EQF) in CNC machining and programming field as minimum requirement, but other Post Upper Secondary Level (Level 5 EQF) related to Aeronautic Production are also suitable.

1.2.6 ELETRONICS/ELECTRICAL TECHINICIAN

DUTIES AND TASKS

- Assembles and installs electronic systems and devices;
- Manual soldering;
- Prepares wiring;
- Assembles cable bundles;
- Repairs designed devices;
- Selects and calibrates appropriate sensors for temperature, stress, pressure and vibration measurement;
- Gives technical support for testing aviation engines.

CAREER PROSPECTS

Can become an Engine Technician and with further studies and certifications can progress into a Licensed Engineer and an Equipment Inspector.

WORK CONDITIONS

- Team work;
- Manual work;
- Indoor work (perform diagnostics and repair at a land-based unit)or aboard an aircraft (with pilot crew providing support for the electronics systems).

HOW TO GET THE JOB?

Post Uppper Secondary Level (Level 5 EQF) in Eletronics, Mechatronics or related field.

1.2.7 CABLE TECHINICIAN

DUTIES AND TASKS

- Groups a set of cables and wires, previously marked, connecting them at the ends with plugs and / or terminals for the manufacture of wiring and according to the technical specifications;
- Carries out drilling operations of different types of contacts (pins, terminals and extension leads);
- Conducts, when applicable, welding with sleeve and weak welding of electrical connection;
- Performs finishing and check the final state of the wiring, after testing, for final inspection shipment;
- Integrates cabling in the aircraft, routing, cutting and adjusting cable rolls according to technical specifications;
- Performs visual inspection of the wiring, monitoring if the cable marking complies with the technical specifications.

CAREER PROSPECTS

Cable technicians can become team leaders and Inspectors.

WORK CONDITIONS

- Spend most of the time outside installing or maintaining cable lines;
- Chief technicians usually do not go into the field unless a problem arises.

HOW TO GET THE JOB?

Secondary level with vocational diploma (Level 3 and 4 EQF).

1.2.8 TOOL, JIG AND FIXTURE MAKER

DUTIES AND TASKS

- Receives drawings for production and designs tool, jigs and fixures for machining, stamping, quality checking and jigs for assembly.

CAREER PROSPECTS

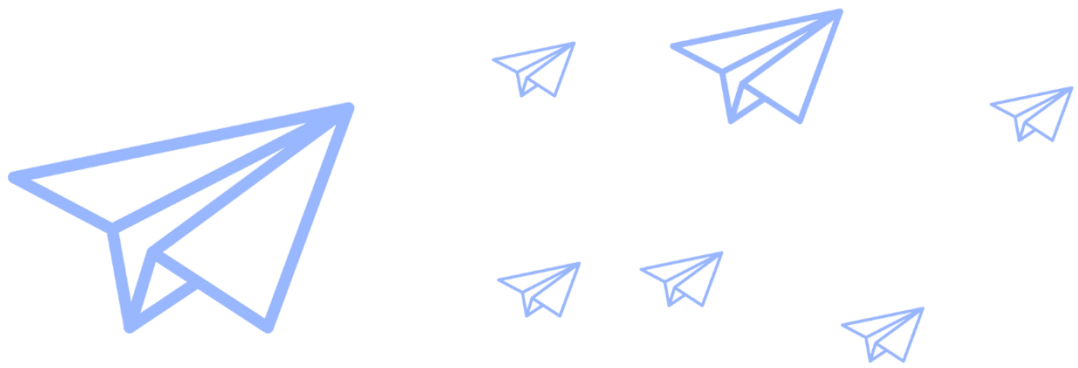
As you gain experience you may progress into a senior Tool, Jig and Fixture Maker, get team leading responsibilities and, eventually, you may work as project manager or department director.

WORK CONDITIONS

- Office work.

HOW TO GET THE JOB?

Upper Secondary Level (Level 4 EQF) in Composites, Structures or related field as minimum requirement, but other Post Upper Secondary Level (lLevel 5 EQF) related to Aeronautic Production are also suitable.



1.2.9 MATERIALS ENGINEER

DUTIES AND TASKS

- Checks for raw material compliance;
- Performs thermal and mechanical treatments;
- Validates welding parameters;
- Quality control;
- Control surface treatments.

CAREER PROSPECTS

As you gain experience you may progress into a senior Materials Engineer, get team leading responsibilities and, eventually, you may work as project manager or department director. Also you can become a Quality Assurance Manager.

WORK CONDITIONS

- Work in a plant;
- Occasionally have to work additional hours.

HOW TO GET THE JOB?

Upper Secondary Level (Level 4 EQF) in Composites, Structures or related field as minimum requirement, but other Post Upper Secondary Level (ILevel 5 EQF) related to Aeronautic Production are also suitable.

1.2.10 PRODUCTION/MANUFACTURING ENGINEER

DUTIES AND TASKS

- Development and industrialization of new processes;
- Planning and Optimization of productive processes;
- Preparation of Documentation and problem solving;
- Contacts with internal and external clients;
- Monitors production capacities: cooperation with other departments in the company.

CAREER PROSPECTS

As you gain experience you may progress into a senior Production/Manufacturing Engineer, get team leading responsibilities. It's possible to become a project manager or to specialise in a particular area. Besides that you can concentrate on research and development or become a Quality Assurance Manager.

WORK CONDITIONS

- Working hours may include regular unsocial hours, including weekend and evening work;
- May have to work extra hours, particularly at times when a new process is being installed and tested;
- High level of autonomy (rarely consult a superior before making a decision);
- Nearly every day wear safety gear;
- Usually work indoors;
- Sometimes team work.

HOW TO GET THE JOB?

Portugal and Spain: Bachelor in Mechanics, Aeronautics or Aerospace or related courses; Level 6 EQF. Although you don't need a Master's degree, having a relevant Masters in engineering or an engineering doctorate can enhance your career prospects..

Poland: Masters in Mechanics, Aeronautics or Aerospace or related courses; Level 7 EQF.

1.2.10 PRODUCTION/MANUFACTURING ENGINEER TESTIMONIAL

"Since I saw Star Wars as a kid, I knew that I wanted to make a career in aeronautics. Growing up, I enrolled in a MSc in Aeronautical Engineering. With my degree, I made my way to my current position as Manufacturing Engineer at a major Aerospace company. A manufacturing engineer is responsible for taking a project/drawing and finding ways to produce it at the lowest cost, in the shortest time possible and without incurring in defective products. After an assembly line is implemented, the role of a Manufacturing Engineer turns to continuous improvement. How can we produce faster and cheaper? To achieve that, you have to rely in various methodologies to pinpoint the problems and identify opportunities for improvement. This is where we get to be creative and proactive in search of solutions. Those solutions can either be simple modifications in the operational procedures (also our responsibility to create) or may require serious investments that take the form of projects that you have to lead and coordinate with different departments within the company and even with suppliers. Especially in the aerospace industry, where tight tolerances and complex processes make the challenge bigger and rewards even more satisfying. In my personal case, I deal with large metallic assemblies, namely wings. These will then assemble to the remaining airplane structures until we get the final airplane. I work in an assembly line that I helped implement from scratch and that now I help develop to its full potential. No doubt, the path was and is full of obstacles, but with focus, proactivity and willingness to learn by yourself and from others they can be surpassed. For me, to have something that started in my head as a simple idea and getting it to work is a great boost to get out of the bed in the morning. Every day is different and at the end, being in an airport and looking at an airplane that I helped build is a great reward".

Job title: **Manufacturing Engineer**
Years of experience: **4,5 years**
Previous jobs: **Flight Operations Engineer**
Education Background: **MSc Aeronautical Engineering**

1.2.11 NDT ENGINEER

DUTIES AND TASKS

- Develops, validates, realizes and qualifies nondestructive testing (NDT) inspection procedures and techniques;
- Proves aircraft conformity;
- Defines aircraft status.

CAREER PROSPECTS

As you get experience you can progress to Inspector, Supervisor or Quality Assurance Manager.

WORK CONDITIONS

- Work in hangars and airfields;
- Noisy sometimes;
- May have to travel and work with chemicals;
- Possibility to work by shifts;
- May work long hours in the construction or normal shifts inside a laboratory.

HOW TO GET THE JOB?

Portugal and Spain: Bachelor in Mechanics Engineering or related field (Level 6 EQF) or Bachelor with integrated masters in Materials Engineering (Level 7 EQF)

Poland: Masters in Materials, Mechanics Engineering or related field; Level 7 EQF

1.2.11 NDT ENGINEER TESTIMONIAL

"Non-Destructive Testing, as the name implies, is an inspection technique applied to one or more components alone or together (installed) that allows the detection of defects without changing components original form. Taking into consideration, the object of the applied technique, defects such as cracks, corrosion, inclusions, cavities, pores, etc. can be detected, wherein according to the type of component, its condition, geometric form and criticality the method or methods are chosen. (Penetrating Liquids, Magnetic Particles, Induced Currents, Ultra-Sons, Rx) In my current activity (Team Leader of Non-Destructive Testing) in Penetrating Liquids and Magnetic Particles methods, the contact with people, managing them as technicians and monitoring their professional development is what makes me feel accomplished. The fact that in our activity inspections are made on components both in the manufacturing process and in maintenance, is something that helps us to grow more and more, for the diversity and criticality of the components. Also, all components are made as the first ones, even if there is already a vast history of previous inspections, because they are for the aeronautical sector and, therefore, they demand lots of requirements and concentration. It is an area in constant evolution, where we work on various types of materials, and the inspection techniques also tend to evolve in terms of products and equipment, so that the technician has at his disposal more and more available means".

Gualter Ferreira
Non-Destructive Testing Techician (Team Leader)

Years of experience: 16
Previous jobs: Plasma/HVOF Application Technician
Education Background: 12th Grade

1.2.12 QUALITY ENGINEER

DUTIES AND TASKS

- Defines quality standards for the creation of products or services;
- Checks to make sure the products and services are in compliance with the quality standards and they coordinate quality improvements;
- Approves FAIR documentation;
- Organizes multidisciplinary teams to solve problems mainly molding defects, taking corrective actions.

CAREER PROSPECTS

As you get experience you can progress to Quality Assurance Manager.

WORK CONDITIONS

- Work indoor
- Team cooperation related activities

HOW TO GET THE JOB?

Poland: Master of sciences; Level 7 EQF

Portugal and Spain: Bachelor's in industrial management or related field; Level 6 EQF. Although you don't need a Master's degree, having a relevant Masters in engineering or an engineering doctorate e can enhance your prospects.

1.2.12 QUALITY ENGINEER TESTIMONIAL

"The main task of the Quality Supervision Engineer is to analyse and interpret the normative requirements and customer requirements and synchronize them with the company quality system.
Analytical thinking, knowledge of machining processes, ability to read technical drawings and specifications are useful. I deal with various problems and quality challenges, among others internal inconsistencies, customer complaints, etc.; it is important to be accurate, factual and insightful but also open to suggestions from employees of other departments in order to find and eliminate the true causes of the problem. In my work it is important to have interpersonal skills and creativity in the introduction of new solutions, good practices or instructions for conduct".

Anna Marek
Quality Control Engineer

1.2.13 PROCESS ENGINEER

DUTIES AND TASKS

- Design, implement, control and optimize industrial processes;
- Data collection, interpretation and report writing;
- Presentation of data and reports to senior colleagues and management;
- Risk assessments of the equipment and processes being used;
- Continual evaluation of equipment and processes to ensure both efficiency and quality remain high;
- Budget responsibilities.

CAREER PROSPECTS

As you gain experience you may progress into a senior Process Engineer, get team leading responsibilities. It's possible to become a project manager or to specialise in a particular area. Besides that you can become a Quality Assurance Manager and Production/Manufacturing Engineer.

WORK CONDITIONS

- Office work;
- Sometimes is necessary to work in hangars and airfields.

HOW TO GET THE JOB?

Poland: Master of sciences; Level 7 EQF

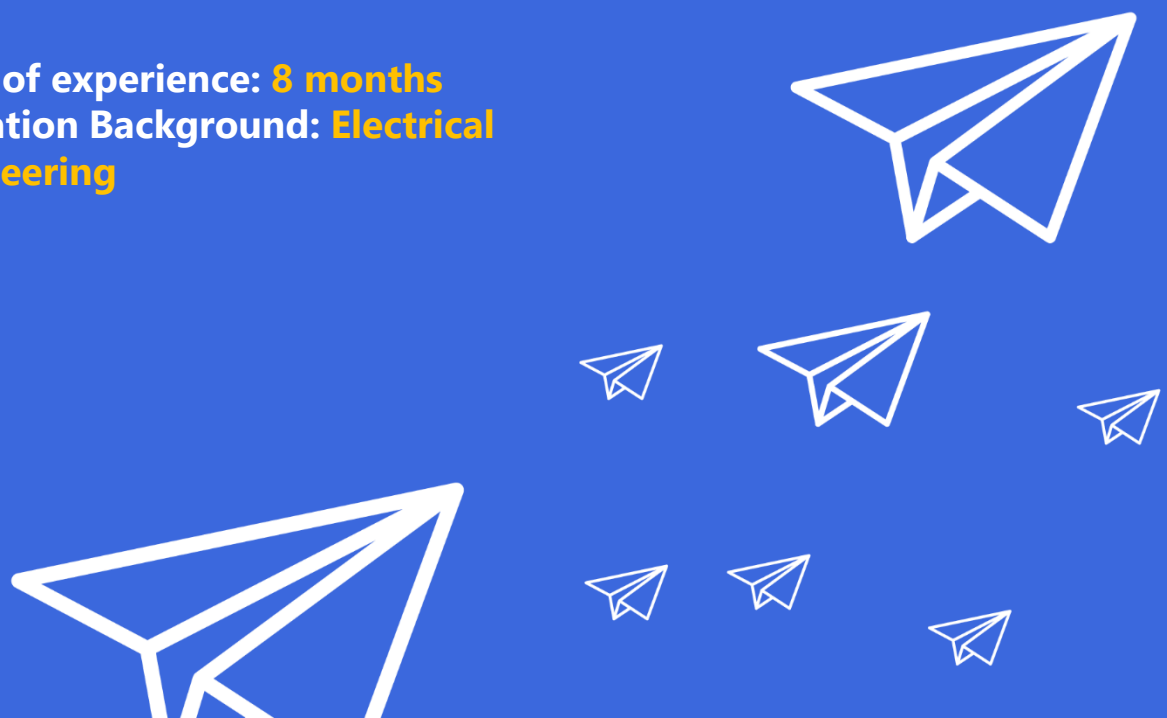
Portugal and Spain: Bachelor's in Aerospace, Materials or Mechanical Engineering or related field; Level 6 EQF. Although you don't need a Master's degree, having a relevant Masters in engineering or an engineering doctorate e can enhance your prospects.

1.2.13 PROCESS ENGINEER TESTIMONIAL

"As a Process Engineer at Mistolin, SA. I made the connection between the formulation, filling and mechanical sectors. I was responsible for following / implementing / improving the performance of 5 production lines. These included tasks such as recording productivities, scheduling mechanical changes for the production of different products and adjusting/tuning electronic parameters of production machines. Also, I implement new working methodologies, both mechanical and human, always with the sense of improving productivity. (Example: implementation of a supervision system / monitoring lines to know in real time the performance of each one) Productivity control is done daily through KPI's, followed by a critical and constructive analysis to improve day by day. During my experience I have had the opportunity to grow personally and professionally. Focus, resilience, critical and proactive spirit are some qualities that develop in a manufacturing world. Excellent work environment with both the shop floor colleagues and the entire administration".

Rafael Carvalho
Process Engineer

Years of experience: 8 months
Education Background: Electrical Engineering



1.2.14 LOGISTICS TECHNICIAN

DUTIES AND TASKS

- Conduct cycle counts on our inventory;
- Ensures compliance of products;
- Ensuring on Time;
- Barcoding inventory;
- Data entry;
- Confirming quantities, catalog numbers, sizes, shipping documentation, etc.

CAREER PROSPECTS

By following further studies can become Production/Manufacturing Engineer.

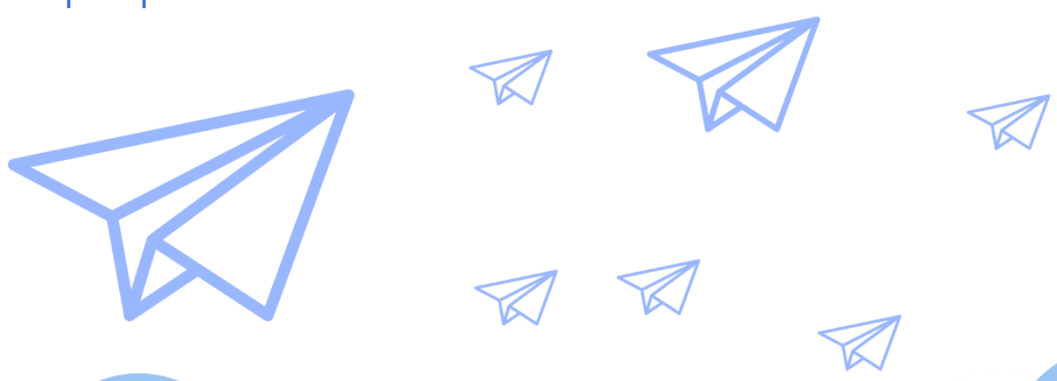
WORK CONDITIONS

- Work in a plant and warehouse.

HOW TO GET THE JOB?

Upper Secondary Level in CAD/CAM field; Level 4 EQF.

Although you don't need a master's degree, having a relevant master's in engineering or an engineering doctorate can enhance your career prospects.



1.3 MAINTENANCE

1.3.1 AIRCRAFT ENGINE TECHNICIAN

DUTIES AND TASKS

- Dismantle, inspect, test, diagnose, repair, modify, reassemble the engine as part of a maintenance and repair activity;
- Troubleshoots and repairs basic engine and related aircraft problems at on-site and off-site locations;
- Performs removal, installation, and replacement of engines, accessories;
- Disassembles, inspect, and reassemble aircraft engines;
- Replaces all Line Replace Units (LRU) as required;
- Assists with engine operational check and functional tests.

CAREER PROSPECTS

As you gain experience you may progress into a senior Aircraft Engine Technician and get team leading responsibilities. Besides that, you can become an Aircraft Maintenance Technician (Licensed Engineer) by taking the certification.

WORK CONDITIONS

- Work in hangars and airfields;
- Requires sitting and standing for extended periods of time;
- Possibility to work by shifts;
- Operates mechanical lifts and elevated work platforms to access work;
- Noisy environment due to aircraft engines and equipment.

HOW TO GET THE JOB?

Poland, Portugal and Spain: Post Upper Secondary Level (Level 5 EQF) in Electronics, Mechatronics or related field.

1.3.2 BASE AIRCRAFT MAINTENANCE ENGINEER (LICENSED ENGINEERS)

DUTIES AND TASKS

- Works on aircraft that require more complex maintenance tasks;
- Works on aircraft that have been withdrawn from service for routine periodic servicing;
- Works on aircraft that major overhauls and re-fits;
- Can then subsequently certify his/her own and other work.

CAREER PROSPECTS

As you gain experience you may progress into instructor and supervisor. Also, you can accumulate other licenses. Finally you may become an Aviation Maintenance Inspector

WORK CONDITIONS

- Work in hangars and airfields;
- Noisy sometimes;
- May have to travel and work with chemicals;
- Possibly work by shifts;
- Tasks could be indoors or outdoors.

HOW TO GET THE JOB?

Poland, Portugal and Spain: EASA Part 66 Aircraft Maintenance License. This license confers different levels of competencies and responsibilities in various areas of activity, according to the categories and subcategories that are registered in that license. After entering one or more subcategories, it is necessary to confirm certified training for the types of aircraft or for groups of similar aircraft in which the professional will act.

1.3.2 BASE AIRCRAFT MAINTENANCE ENGINEER (LICENSED ENGINEERS) TESTIMONIAL

"My experience in the Portuguese Air Force for 32 years, with different aircrafts, in several sectors of maintenance at various levels, of line, backshop, hangar, cell, motors. This brought to me a lot and good experience not only professionally but also personally. We learn to deal with several people, with different backgrounds, personalities, ways of thinking through each situation, but always with respect and responsibility, which allowed us to be better persons and professionals. As any other profession, the duty is always kept in mind, but in this particular case of aviation, it increases a lot. Human lives depend on us and they require a bigger focus, responsibility and attitude. Each one of us has in charge for each other and for his/her job, which means that we are technicians and inspectors of each other. As it is said in regular language: "planes are not cars that you can lean against the roadside when they broke down" or "move and don't stay up there". The evolution in aviation keeps moving and with high technologies always improving, which show us that we don't know everything and there is always what to learn. Who ever gets in for the first time in a plane never forgets what is the feeling of that experience, which lead us to do it again and to the curiosity of knowing how it all works, which become all very special and unique".

José Domingues
TMA (Aircraft Maintenance Technician)

Years of experience: over 34 years
Previous jobs: Portuguese Air Force
Education Background: High School

1.3.3 AIRWORTHINESS ENGINEER

DUTIES AND TASKS

- Ensures that aircraft are fit to fly and comply with all the relevant aviation regulations;
- Supports the integration of airworthiness requirements into the overall engineering, manufacturing and maintenance activities;
- Deals with aircraft and associated software systems that test for airworthiness on a daily basis.

CAREER PROSPECTS

Can become Safety Audit or Academy instructors.

WORK CONDITIONS

- Usually work both indoors and outdoors, depending on the location and subject of the maintenance;
- Sometimes there is the possibility of accompanying inspections made abroad and, in these cases, we have direct contact with the airplane.

HOW TO GET THE JOB?

Bachelor's degree in Aeronautical or Mechanical engineering or related technical field.
Work experience with EASA Organizations Part M Subpart G.
Familiarization with technical manuals of the manufacturer (example AMM, IPC, SRM, among others);

1.3.3 AIRWORTHINESS ENGINEER TESTIMONIAL

"My job is to ensure that an airplane before taking off has all the necessary inspections in place and complies with all safety parameters. This job, which is mostly office work, is mainly based on documentation and is what is called the work of a CAMO department - Continuing Airworthiness Management Organization. Sometimes, there is the possibility of accompanying inspections made abroad, and in these cases, we have direct contact with the airplane. Therefore, this profession allows to travel all over the world - contacting with new languages, new cultures and habits, as well as meeting people with the same passion, leaving behind any linguistic or even racial barriers ... One of the peculiarities of the profession is that learning must be constant. People who have a taste for math and physics and some passion for airplanes can certainly join this career".

Sílvia Almeida
Airworthiness Engineer

Years of Experience: 6 months
Precious jobs: Airworthiness Engineer trainee
Education Background: Aeronautical Engineering

2. AIR TRANSPORT AND FLIGHT OPERATIONS

Europe has one of the most liberalized and integrated air transportation markets in the world. The single aviation market created by the European Union (EU) was subsequently expanded to the European Common Aviation Area (ECAA). Over 40 per cent of seats are offered by LCCs, which is the highest among all world regions. Air transport supports 12.2 million jobs and generates $823 billion within European economic activity. That is 3.3% of all employment and 4.1% of all GDP in European countries in 2016. Forecasts suggest that in 2036 aviation could see over 7.7 billion passengers and support 97.8 million jobs and $5.7 trillion in economic activity worldwide.

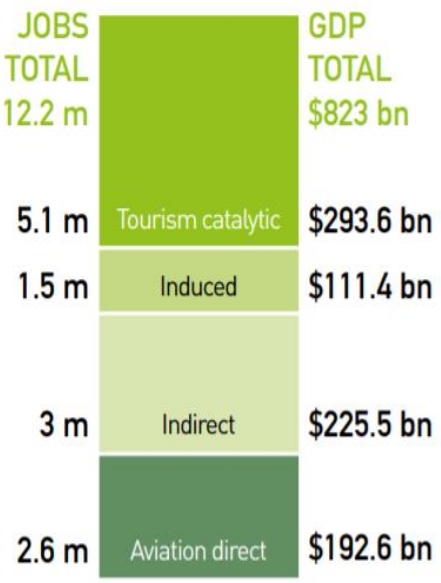


Figure 2. Total jobs and GDP supported by air transport in Europe

Source: Aviation Benefits Beyond Borders 2018.

The total impacts – including those from the operations of the air transport sector itself, the impact of the air transport sector's procurement of inputs of goods and services from its supply chain, and the impact of employees of the air transport sector and its supply chain spending their wages – mean the **air transport sector supported 12.2 million jobs and contributed $823 billion to GDP in Europe.** (Aviation Benefits Beyond Borders, 2018).

Air travel in Europe is expected to continue to **grow at about 3.4% per year over the next two decades**. This increase will, in turn, drive growth in the economic output and jobs that are supported by the air transport industry over the next 20 years. Oxford Economics forecasts that **by 2036 the impact of air transport and the tourism it facilitates in Europe will have grown to support 18 million jobs** (49% more than in 2016) **and a $1.6 trillion contribution to GDP** (a 90% increase).

Employment

Every person directly employed in the aviation sector and in tourism made possible by aviation supported another 4.7 jobs elsewhere in Europe. The aviation sector in Europe **directly employed an estimated 2.6 million people in 2016**. (Aviation Benefits Beyond Borders, 2018)

- **519,000** of those people (20% of the total) were in **jobs for airlines or handling agents** (for example, flight crew, check-in staff, maintenance crew, reservations and head office staff).
- Another **166,000** people (6.5% of the total) **worked for airport operators** (for example, in airport management, maintenance, security, and operations).
- **1.5 million jobs** (57%) were **on-site in airports, at retail outlets, restaurants, hotels**, etc.
- A further **341,000 people** (13%) were employed in the **manufacture of civil aircraft** (including systems, components, airframes, and engines) – what we have referred in this Careers Kit as Aeronautics Industry.
- **Air navigation service providers** employed an additional **77,000 people** (3%).

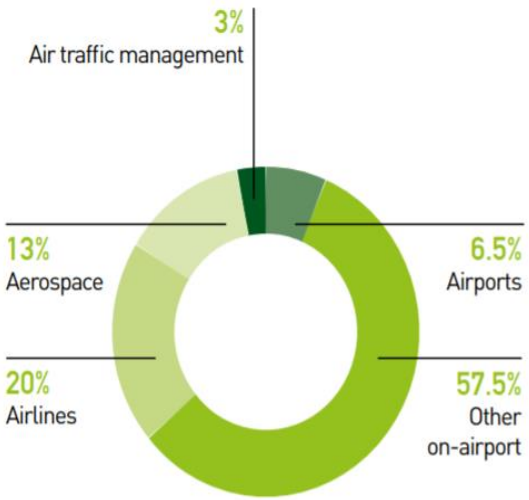


Figure 3. Direct employment

Source: Aviation Benefits Beyond Borders 2018.

European airports are a source of a wide variety of job categories, with different positions spread on-site and off-site across the airports (Figure 4).

Figure 4. Types of jobs at a typical European airport

Source: ACI Europe and Intervistas, Economic Impact of European Airports, 2015.

Needs and Tendencies for employment

The commercial passenger aircraft fleet is growing, and Airbus forecast suggested it will continue to grow in terms of the numbers of aircraft over 100 seats in the coming years. In fact the GMF (Global Market Forecast) suggests the fleet will more than double from today's level of around **21,000 aircraft to 48,000 in 20 years' time** (Figure 6). (Airbus Global Market Forecast 2018-2037).

Based on the expected increase of passenger fleet in service for the next 20 years, the **2017 Airbus Global Market Forecast Report underlines future needs for:**

- Maintenance, Repair and Overhaul market (**MRO**);
- New **pilots**;
- **Technicians**.

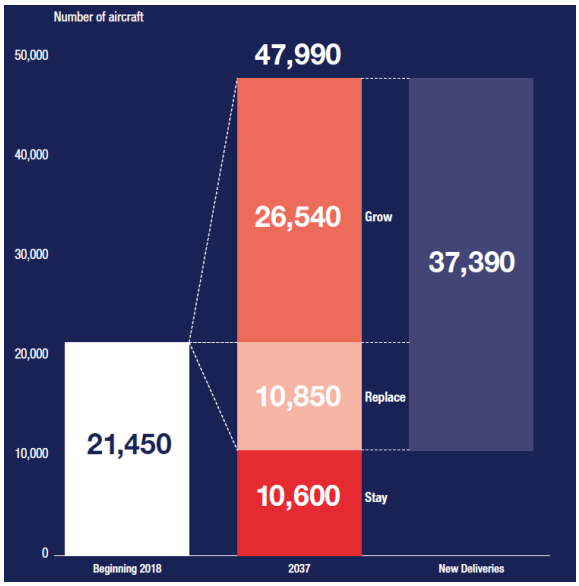


Figure 5. The world aircraft fleet will more than double over the next 20 years
Notes: Passenger aircraft (≥ 100 seats) | Jet freight aircraft (>10 tonnes), Rounded figures to the nearest 10
Source: Airbus GMF 2018.

2.1 MANTAIN IT

2.1.1 Line Aircraft Maintenance Engineer (Licensed Engineers)

DUTIES AND TASKS

- Works on operational aircraft performing relatively minor maintenance tasks;
- Replaces parts that are required between major service overhauls and to subsequently certify these tasks;
- Works generally while the aircraft is in service, during turnarounds or overnight.

CAREER PROSPECTS

As you gain experience you may progress into instructor and supervisor. Also you can acumulate other licenses. Finally you may become na Aviation Maintenance Inspetor

WORK CONDITIONS

- Team work;
- Shift work;
- Work under stress, even more than base line aircraft maintenance engineers.

HOW TO GET THE JOB?

Poland, Portugal and Spain: EASA (European Union Aviation Safety Agency) Part 66 Aircraft Maintenance License. This license confers different levels of competencies and responsibilities in various areas of activity, according to the categories and subcategories that are registered in that license. After entering one or more subcategories, it is necessary to confirm certified training for the types of aircraft or for groups of similar aircraft in which the professional will act.

2.2 PROVIDE GROUND HANDLING SERVICES

2.2.1 BAGGAGE AGENT

DUTIES AND TASKS

(if in terminal)
Monitors the flow of baggage in airports to ensure baggage makes connections, arrives at the destinations in a timely manner.
Transfers luggage from check-in areas to departure areas;
Communicates with baggage managers to ensure compliance with regulations and apply correct solutions.

(if in ramp)
Loads and unloads baggage and cargo;
Operates a variety of machinery and equipment, including baggage loader belts, diesel pushback tractors and small baggage cart tugs

CAREER PROSPECTS

As you gain experience you may progress into team supervisor or Ramp Agent.

WORK CONDITIONS

- Physical job;
- may lift bags of up to 32kg weight;
- Every bag needs to be scanned so that it can be retrieved quickly.

HOW TO GET THE JOB?

Primary Level (Level 2 EQF).
Driving License.
Baggage Handler Course (usually given by the company).

2.2.2 CARGO AGENT

DUTIES AND TASKS

- Monitors the flow of cargo in airports
- Transfers cargo from check-in areas to departure areas;
- Communicates with cargo managers to ensure compliance with regulations and apply correct solutions;
- Operates a variety of machinery and equipment, including baggage loader belts, diesel pushback tractors and small baggage cart tugs.

CAREER PROSPECTS

As you gain experience you may progress into team supervisor or Ramp Agent.

WORK CONDITIONS

- Physical job;
- May lift heavy stuff.

HOW TO GET THE JOB?

Primary Level (Level 2 EQF).
Driving License.
Baggage Handler, Ground Handling or related Course (usually given by the company).

2.2.3 RAMP AGENT

DUTIES AND TASKS

- Coordinates loads and unloads of baggage and cargo;
- Coordinate slots;
- Coordinate catering;
- Coordinates cleaning teams.

CAREER PROSPECTS

As you gain experience you may progress into supervisor or manager.

WORK CONDITIONS

- Coordinates loads and unloads of baggage and cargo;
- Coordinate slots;
- Coordinate catering;
- Coordinates cleaning teams.

HOW TO GET THE JOB?

Primary Level (Level 2 EQF).
Driving License.
Baggage Handler, Ground Handling or related Course (usually given by the company).
Besides that, you may gain experience first on as Baggage Agent, Cargo Agent or Passenger Handling Agent.

2.2.4 PASSENGER HANDLING AGENT

DUTIES AND TASKS

Serves passengers within the terminal in matters such as billing, boarding passengers to the plane, closing the flight and covering the direct customer service desks.

CAREER PROSPECTS

As you gain experience you may progress into supervisor, manager or ramp operator.

WORK CONDITIONS

- Shifts work;
- 7 days non-stop;
- Stress;
- Fatigue.

HOW TO GET THE JOB?

Secondary Level (Level 3 EQF) + course in ground/passenger handling, airport operations or related course (usually given by the company).

Or

Upper Secondary Level (Level 4 EQF) through a double certification course in ground/passenger handling, airport operations or related course. Good level of English. However, people may have to take refreshment courses once entering the company.

2.2.4 PASSENGER HANDLING AGENT TESTIMONIAL

"Working in aviation is not only a job but a way of life (...) "Once you enter you can never leave." It is a challenging work where solving different problems is part of the day-to-day life, not only for the simple fact of interacting with several people, but also because of the need to solve operational and boarding irregularities. The airport is a world where we meet colleagues and great friendships happen".

Miguel Pinheiro
Cabin Crew

Years of experience: 11 years
Previous Jobs: Scale Supervisor, Operations Coordinator, Airline Representative, Ground Dispatcher, TTAE PAX
Education Background: Civil and Private Aviation

2.2.5 AIRCRAFT MARSHALLER

DUTIES AND TASKS

- Signals pilots to assist them in operations such as turning, slowing down, stopping, and shutting down engines;
- Leads aircrafts to their parking stands or to the runway;
- Indicates directions to the pilots by driving a "follow-me" car;
- Controls natural environment in order to minimize the risk of collision for aircraft.

CAREER PROSPECTS

As you gain experience you may progress into supervisor, manager or Ramp operator.

WORK CONDITIONS

- All-seasons work in the open field of airport;
- Work in equivalent system - shifts up to 12h;
- Exposure to weather and hazardous conditions;
- Work in close proximity to operating aircraft. .

HOW TO GET THE JOB?

Secondary Level (Level 3 EQF) + course in ground/passenger handling, airport operations or related course (usually given by the company). Good level of English. Driving license. However, you may have to take refreshment courses once entering the company

2.2.6 AIRCRAFT REFUELER TECHNICIAN

DUTIES AND TASKS

- Organizes and executes fuel and refuel operations, including the storage of fuel and the control of the quality and quantity of fuel deliveries. In smaller airports these activities are unified, so that the fuel agent performs both functions. On the other hand, at large airports, these activities are concessioned separately and, for the most part, there are two agents on board in each installation;
- Replenishes oil and other fluids.

CAREER PROSPECTS

May become team leaders or progress to office roles.

WORK CONDITIONS

- Noisy;
- Stress;
- Fatigue;
- Working shifts.

HOW TO GET THE JOB?

Secondary Level (Level 3 EQF).

2.2.7 AIRPORT SECURITY SPECIALIST

DUTIES AND TASKS

- Participates in the planning of the actions as well as elaboration and implementation of airport security procedures and regulations (Security Plan);
- Executes the necessary activities for the coordination of security airport in collaboration with the State´s Security Forces;
- Participates in raising awareness and awareness in security matters to all the people from security collaborating in the design and delivery of the training programs of the security courses;
- Collaborates in the management of accreditations and authorizations of personnel and vehicles.

CAREER PROSPECTS

May become Airport Security Managers.

WORK CONDITIONS

- Office Work;
- High level of responsibility.

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HOW TO GET THE JOB?

Post Upper Secondary Education (Level 5 EQF) in Civil Aviation. Security, Airport Security or similar.

2.2.7 AIRPORT SECURITY SPECIALIST TESTIMONIAL

"As an intern in the Airport Security Department, one of my tasks is to determine the necessary people and schedule for the Passenger Screening area. As you may know, the passenger flow in an airport is not even throughout the day. There are times when there are a lot of passengers arriving at the airport, checking in, going thru security and boarding the flights, and there are sometimes when all the flights have departed and there are few passengers arriving at the airport to wait for the next flight. So, to avoid long queues on one hand, and idle screening positions on the other, we must optimize the number of necessary staff to the screening point at a given time, so that we do not have expenses during off hours. This is what we can call as part of the short-term planning. As a long-term planning, considering the estimates of passenger and cargo movement growth, we plan for additional staff hiring, new security screening equipment or undergoing constructions works to increase the airport capacity. Another task we perform is under Quality Control. The regulatory framework in Aviation Security is very strict, for all the known reasons. There are a lot of rules and regulations that we must abide by, so we perform audits and tests to determine if we are meeting the necessary standards in terms of performance and requirements. These audits and tests cover not only the security screening procedures of passengers, staff, hand and hold luggage, and so on, but also the physical infrastructure requirements, such as limitation fences or access control doors, and the security access card issuing procedures, just as an example".

Duarte Cunha
Security Department Intern

Years of experience: 3 years
Previous Jobs: Station Supervisor SATA; Research Assistant IST (ongoing)
Education Background: MSc Transport Planning and Operations; Undergoing PhD in Transportation Systems

2.2.8 AIRPORT SAFETY SPECIALIST

DUTIES AND TASKS

- Plans, develops and implements safety procedures and systems;
- Studies safety regulations and restrictions relative to aviation company operations;
- Directs activities of personnel in order to safeguard the application of safety measures in compliance with regulations.

CAREER PROSPECTS

May become Airport Safety Managers.

WORK CONDITIONS

- Office Work;
- High level of responsibility.

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HOW TO GET THE JOB?

Bachelor in Mechanics, Civil, Electronics Engineer or related area. Level 6 EQF-

2.2.8 AIRPORT SAFETY SPECIALIST TESTIMONIAL

"Currently, every air operator is obliged by international regulations to implement the Safety Management System, including airports. Therefore, for several years, the position of Safety Manager has been established, which deals with the administration of the Safety Management System (SMS). Security understood as SAFETY is a continuous process of risk identification and risk management and keeping it at an acceptable level. The main elements of the SMS are, among others: identification of threats, risk analysis, reporting system of events likely to affect the safety of flight operations, applying the principles of the culture of fair treatment of so-called "just culture".
Through the SMS system, employees are encouraged to report any irregularities, errors, occurring situations or identified threats that can lower the level of flight operations safety. Reported events are analyzed and measures or recommendations are prepared that completely eliminate the threat or alleviate its consequences".

Agnieszka Kwolek
Safety Manager

2.3.9 SCREENING OFFICERS (persons, baggage items carried)

DUTIES AND TASKS

- Inspects baggage and screens passengers to detect and prevent potentially dangerous objects from being transported into secure areas or into aircraft;
- Coordinate with airport police if a situation at a checkpoint requires police involvement.

CAREER PROSPECTS

May progress into team leaders or supervisors.

WORK CONDITIONS

- Almost always work indoors;
- Regularly wear safety attire;
- Sometimes exposed to radiation from the x-ray machines;
- Often exposed to loud sounds and noise levels that may be distracting;
- Exact and accurate when performing their job;
- Shifts work is common;
- May work weekends, nights or early mornings.

HOW TO GET THE JOB?

Secondary Level (Level 3 EQF) + training in airport security delivered by the company. Good level of English-

2.2.10 FLIGHT DISPATCHER

DUTIES AND TASKS

- Plans flights planning, from setting out its route and calculating the basic flight parameters to determining backup airfields;
- Checks route limitations and meteorological conditions;
- Prepares comprehensive documentation;
- Calculates the amount of fuel necessary to perform air operations;
- Conducts check-ins with flight crews before a flight.

CAREER PROSPECTS

It can be a good beginning for those who want to become pilots.

WORK CONDITIONS

- Team work;
- Possible shift work, including days, nights, weekend and holidays;
- Work under pressure;
- Fast decisions concerning safety.

HOW TO GET THE JOB?

Secondary Level (Level 3 EQF) + Flight dispatcher course. Good knowledge of English is a must.

2.3 OPERATE IT ON FLIHT

2.3.1 FLIGHT ATTENDANT

DUTIES AND TASKS

- Provides assistance to passengers and crew;
- Ensures compliance with safety regulation;
- Ensures comfort and safety during flight according to established standards and routines;
- Takes into account the means available on board;
- Serves meals aboard;
- Sells products aboard.

CAREER PROSPECTS

- Flight Attendant in Business Class
- Flight Attendant in First Class
- Cabin Chief

WORK CONDITIONS

- Salary update approx. every 2 years;
- Maximum 6 days flying in a row;
- Maximum 12 h flying in a row;
- Frequent travel;
- Unstable Scheduled;
- May be called to work on off days;
- Exact in their work (errors could cause passengers to be injured);
- Almost always work indoors.

HOW TO GET THE JOB?

- High School diploma;
- Qualification training (provided by the company);
- English and other language skills;
- Good health and high overall psychological resistance.

2.3.1 FLIGHT ATTENDANT TESTIMONIAL

"On a personal level, this job makes you leave your comfort zone, you meet new people almost every day, and you have a whole new bunch of responsibilities you didn't even know existed. Personally I feel I grew immensely after a year of working in aviation. On the other hand, professionally speaking, I consider that being a cabin crew and/or working in aviation is one of the best jobs in the world. You get to travel, meet new cultures, visit countries you probably never would, encounter amazing people from everywhere around the world, learn new languages and so much more. But for me, the most important and most gratifying part of the job is the proximity to the passengers. The feeling you get when you see that you are part of their own journey and that they look to you for protection, for safety, for comfort or sometimes just so you can ease their fear of flying. With this job you can truly have a connection and a proximity with all kinds of people. And the best thing of them all, is that every single day is different. There isn't one day in this job that is the same, and I love that. It isn't an easy job, I must say. It is very demanding, physically and psychologically as well. Physically because you work a lot of hours, sometimes during the night when your body is used to being asleep, and you don't have enough time to rest properly or even eat proper healthy food (which obviously affects your body). Psychologically speaking, it can also be tricky as you spend a great part of the time alone, because you are always flying with different crew members it is difficult to keep a good relationship or even a friendship outside the aircraft. But that all depends on your own personality! There are people who don't even see that as a problem, some that handle it pretty well and others that don't. Finally, I just want to say that I think everyone should have the opportunity of working in aviation. It just gives you so many skills and so many knowledge about life, in all aspects, which no other job gives".

Mariana Nogueira
Cabin Crew

Years of experience: 1 year and a half
Previos Jobs: Waitress
Education Background: Degree in Chemistry

2.3.2 AIRLINE TRANSPORT PILOT

DUTIES AND TASKS

- Makes sure all information on the route, weather, passengers and aircraft is received;
- Uses that information to create a flight plan, which details the altitude for the flight, route to be taken and amount of fuel required;
- Ensures the fuel levels balance safety with economy and supervise the loading and fuelling of the aircraft;
- Makes sure all safety systems are working properly;
- Gives briefs the cabin crew before the flight and maintain regular contact throughout the flight;
- Carries out pre-flight checks on the navigation and operating systems;
- Communicates with air traffic control before take-off and during flight and landing;
- Ensures noise regulations are followed during take-off and landing;
- Understands interpret data from instruments and controls;
- Makes regular and checks on the aircraft's technical performance and position, on weather conditions and air traffic during flight;
- Communicates with passengers using the public address system.

WORK CONDITIONS

- Frequent travels away from home;
- May work irregular hours;
- Work in airports and aeroplane cockpits;
- Noisy sometimes;
- Work under pressure;
- Fatigue;
- Jetlag;
- High level of concentration and responsibility;
- Need to be alert and quick to react.

CAREER PROSPECTS

- Type-rating course on a company aircraft;
- After 1,500 hours of flying time (500 of that must be in a plane which requires more than one crew to operate it), it will be issued a full ATPL. This is what is required to progress to the role of captain;
- Flying a larger aircraft rather than becoming a captain;
- Move into office-based management roles (that could combine with some active flying time too);
- Flight operations inspectors; and Specialists in air accident investigators.
- Due to renovation of routes, increased number of fleet, replacement of retired employees and new fleet models which require new type-ratings the job opportunities for pilots in the next years will increase. According to APPLA (Portuguese Association of Airline Pilots) until 2035 will be needed 617 thousand pilots all over the world, specifically for Europe 104 thousand.

HOW TO GET THE JOB?

- Airline transport Pilot License (ATPL);
- 16 years old in the first flight;
- At least 18 years-old for license;
- JAR-FCL3.
- To get ATP license two paths are possible: modular or integrated course. The integrated course includes instruction hours, theoretical exam and training flight; ability test for CPL(A) in monoengine or multiengine airplane and ability test for IR license on multiengine airplane. The modular course will depend on the licenses you already have.

DUTIES AND TASKS

Unscheduled flight activities, such as aerial application, charter flights, aerial photography, and aerial tours; Checks the overall condition of the aircraft before and after every flight; Ensures that the aircraft is balanced and below its weight limit; Ensures fuel supply is adequate, weather conditions are acceptable, and submit flight plans to air traffic control; Communicates with air traffic control over the aircraft's radio system; Operates and controls aircraft along planned routes, and during takeoffs, and landings; Monitors engines, fuel consumption, and other aircraft systems during flight and respond to any changes in weather or other events, such as engine failure; Navigates the aircraft by using cockpit instruments and visual references.

CAREER PROSPECTS

You can then take the modular courses to get the Airline transport Pilot License (ATP). Employment opportunities are positive, due to lack of people willing to work under dangerous conditions considering the wage offered.

WORK CONDITIONS

- No scheduling;
- Reduced work-life balance;
- SOS availability;
- High phsysical demand, due to drastic temperature;
- Periodic summer work for fire combat, for example;
- Fatigue;
- Jetlag;
- High level of concentration and responsibility;
- Need to be alert and quick to react.

HOW TO GET THE JOB?

Commercial Pilote License;. At least 18 years-old for license; The integrated courses offer a minimum of 135 and maximum 180 hours of flight training and a minimum of 350 and maximum of 500 instruction hours. Also theoretical exams are taken. The modular course will depend on the licenses you already have.

2.4 NAVIGATION

2.4.1. ACCIDENT AND INCIDENT INSPECTORS

DUTIES AND TASKS

- Inspects incidents and accidents;
- Collects facts/evidences;
- Researches, tests, analysis, sequence determination of the event;
- Identifies safety deficiencies;
- Elaborates technical reports.

CAREER PROSPECTS

May progress into Head of Department.

WORK CONDITIONS

- Work in airports and airplane cockpits;
- Noisy environment sometimes;
- Office Work.

HOW TO GET THE JOB?

Bachelor in Mechanics, Aeronautics or Aerospace or related courses; Level 6 EQF. Aviation audit authorization.

2.4.2. AIR TRAFFIC CONTROLLER

DUTIES AND TASKS

Monitors and directs the movement of aircraft on the ground and in the air; Prior to takeoff, organizes flight plans and directs planes to runways; Keeps in communication with pilots and alerts them of weather, wind or visibility changes at different altitudes; Provides navigational information; In case of emergency, alerts the proper authorities and initiate search and rescue; Maintains communication with other towers and airports; When a plane arrives or departs, accepts or transfers communication to controllers at other airports; Communicates with baggage handlers and other airport workers to keep them informed of flight schedules and changes; Inspects and adjusts radios and runway lighting; Keeps and reviews records of flight patterns and daily activity.

CAREER PROSPECTS

Specialize in tower controllers, in approach and departure controllers or in route controllers. Job growth for air traffic controllers is expected to grow by 3% for the years 2016 through 2026. Competition for air traffic controller jobs is expected to be very strong, with many people applying for a relatively small number of jobs.

WORK CONDITIONS

- Stress and pressure for being responsible of airplanes safety;
- May have to work additional hours;
- Employees may rotate among day, evening, and night shifts, along with weekends and holidays;
- May work in dark rooms.

HOW TO GET THE JOB?

Complete training in Air Traffic Controller and on-job training in NAV Portugal, ENAIR Spain or PANSA Poland. *Minimum requirements to enter NAV, ENAIR and PANSA's training in Air Traffic Controller:* Bachelor (3 years) in related area or 180 ECTS completed. Medical Certification Class 3; Visual Acuity Certification; Psychic conditions.

2.4.3. SPECIALIST AVIATION METEOROLOGIST

DUTIES AND TASKS

- Analyses weather situation in terms of the safety of aircraft take-off and landing;
- Makes proper observations of atmospheric phenomena affecting the air traffic;
- Prepares short-term or long-term weather forecasts used in aviation, shipping, agriculture and other areas and for the information of the general public;
- Conducts research related to the composition, structure and dynamics of the atmosphere

CAREER PROSPECTS

May progress into Head of Department.

WORK CONDITIONS

- Analytic and scientific work;
- Electronic data analysis.

HOW TO GET THE JOB?

Master degree Meteorology, Level 7 EQF. Good knowledge of English.

2.4.3. SPECIALIST AVIATION METEOROLOGIST TESTIMONIAL

"Flying in ever-changing and uncertain atmospheric conditions is difficult and the Specialist Aviation Meteorologist helps in understanding the weather in the area and during the particular pilot flight or mission.

There is no routine in an aviation weatherman work because almost every day the weather is different. This is work for passionate people who are keen on the weather; the ones who think otherwise always had hard time in this work.

The fairly complicated weather in Poland means that the training takes a very long time but brings a lot of satisfaction. Contact with the aviation industry (pilots, controllers, airport dispatchers, etc.) and frequent trips abroad broaden your knowledge, not only in the aspect of aviation meteorology. The group of aviation meteorologists in Poland is small, that is why they know the sector well. There are frequent trainings both for learning and teaching".

Tomasz Miazga
Aviation Meteorologist

2.4.4. AIRWAY TRANSPORTATION SYSTEMS SPECIALISTS

DUTIES AND TASKS

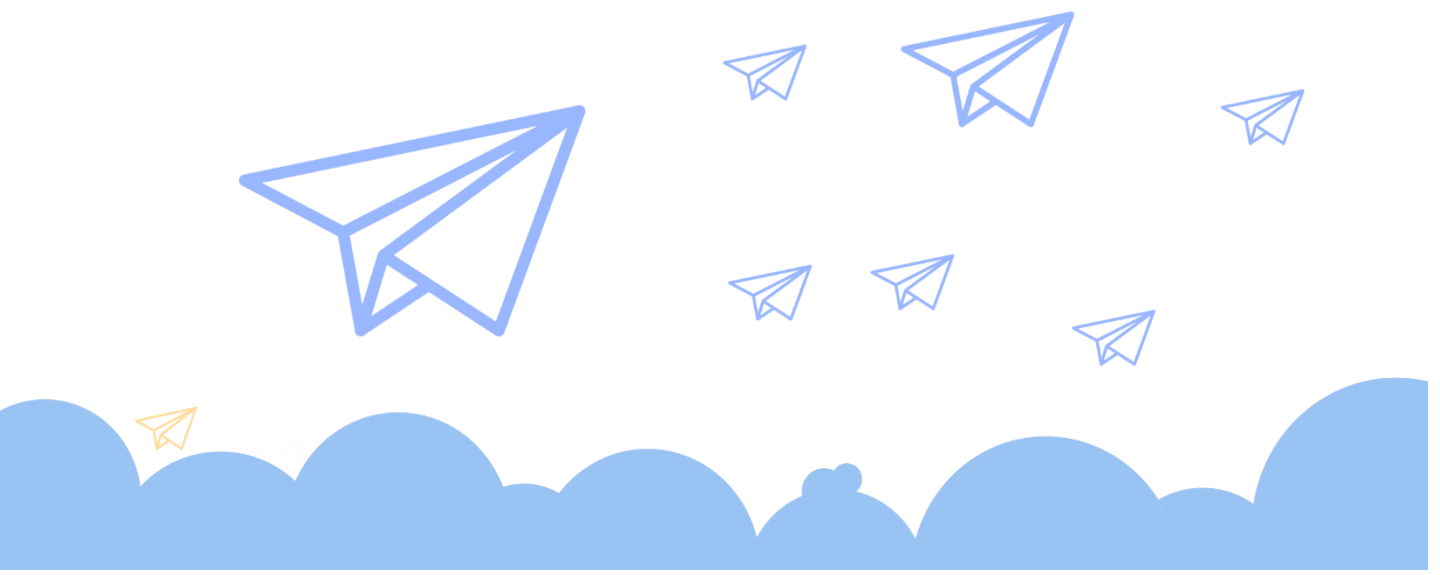
- Installs, tests, troubleshoots, repairs and certifies: radar, communications equipment, navigational aids, airport lighting, backup power;
- Ensures that all systems are working properly, including everything air traffic controllers and pilots use for safe flight;
- Maintains airway facility systems.

CAREER PROSPECTS

May become specialize in Environmental, Navigational Aids, Communication, Radar, or Automation and after gaining experience become team leader or head of department.

WORK CONDITIONS

- Work indoors and outdoors
- Travel to connect systems around different places to keep air travel safe.
- Cooperation with air traffic controllers.



Where can I work?

1.1.1 CAD/CAM Technician

Portugal
CEiiA; LAUAK, Mecachrome; EMPORDEF TI; OGMA; Caetano Aeronautic; Thales; Altran; Active Space Technologies; UAVision Aeronautics; TEKEVER; OPTIMAL; Procut; Air Olesa; Iberomoldes Group; Embraer; Grupo Pinto Brasil; Ricardo & Barbosa; Edaetech – Engenharia e Tecnologia

Poland
Pratt & Whitney Poland (Rzeszów, Kalisz, Niepołomice), MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Engineering Design Center, Collins Aerospace (UTC Aerospace Systems Wrocław Sp. z o.o.), PZL Świdnik – Leonardo Helicopters Company

Spain
UMI AERONAUTICA; Aernnova Aerospace; Mtorres; ITPAero; WEC Velatia; NOVALTI; ASTORKIA; SENER; Talleres Aratz; ACITURRI

1.1.2 Simulation Engineer

Portugal
EMPORDEF TI

Poland
ETC-PZL Aerospace Industries; MOOG, Engineering Design Center, Collins Aerospace, PZL Świdnik – Leonardo Helicopters Company

Spain
GMV Innovating Solutions; ESSS

1.1.3 Aircraft Project Engineer (Structures)

Portugal
CEiiA; LAUAK, Mecachrome; OGMA; Embraer; Caetano Aeronautic; TEKEVER; Active Space Technologies; CODI

Poland
Pratt & Whitney Poland, MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Engineering Design Center, Collins Aerospace (UTC Aerospace Systems Wrocław Sp. z o.o.), PZL Świdnik – Leonardo Helicopters Company

Spain
Aernnova Aerospace; Talleres Aratz; ACITURRI; NOVALTI; SENER

1.1.4 Aircraft Project Engineer (Avionics)

Portugal
CEiiA; OGMA; Embraer; Caetano Aeronautic; Thales; ALTRAN; UAVISION; TEKEVER; LusoSpace

Poland
Pratt & Whitney Poland, MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Engineering Design Center, PZL Świdnik – Leonardo Helicopters Company

Spain
ITPAero; TECNOBIT; ACITURRI; AERODISA; SENER

1.1.5 Aircraft Project Engineer (Engines)

Poland

Pratt & Whitney Poland, MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Sikorsky/PZL Mielec, Engineering Design Center, Collins Aerospace (UTC Aerospace Systems Wrocław Sp. z o.o.), PZL Świdnik – Leonardo Helicopters Company

Spain

ITPAero; ACITURRI

1.1.6 Stress Analysis Engineer

Portugal

Active Space Technologies; LusoSpace; TEKEVER: Mecachrome?; CEiiA; ISQ; Karmann Ghia de Portugal

Poland

Pratt & Whitney Rzeszów S.A., MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Engineering Design Center, Pratt & Whitney Kalisz, Collins Aerospace, PZL Świdnik – Leonardo Helicopters Company

Spain

Aernnova Aerospace; ITPAero; NOVALTI

1.2.1 Composites Tecnician

Portugal
OGMA, Embraer; Caetano Aeronautic; CEiiA; Amorim Cork Composites; INEGI; LAUAK; Optimal; Active Space Technologies; CODI

Poland
Pratt & Whitney, MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Safran Aero Engines, PZL Mielec Sikorsky Company, MTU Aero Engines Polska Sp. z o.o., Collins Aerospace, PZL Świdnik – Leonardo Helicopters Company

Spain
Aciturri; UMI AERONAUTICA; Aernnova Aerospace; Alestis; Mtorres; ITPAero; SENER;

1.2.2 Metallurgist

Portugal
Optimal; OGMA; TAP; LAUAK; Meachrome; Embraer; Mecahers Aeronautica; Caetano Aeronautic; Fresatudo; EMMAD; Procut; Olesa; Iberomoldes;

Poland
Pratt & Whitney Poland (Rzeszów, Kalisz), MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Pratt&Whitney Tubes (Niepołomice)

Spain
Aciturri; Aercal: Mtorres; ITP Aero; NOVALTI; Talleres Aratz; ACITURRI;

1.2.3 Technician of Metal Treatment

Portugal
OGMA; TAP; LAUAK; Meachrome; Embraer; Mecahers Aeronautica; Caetano Aeronautic; Fresatudo; EMMAD; Omnidea;Procut; Olesa; Iberomoldes;

Poland
MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Collins Aerospace, Pratt&Whitney Poland (Rzeszów, Kalisz)

Spain
UMI Aeronáutica; Mtorres; ITP Aero; NOVALTI; ASTORKIA; GRUPO TTT:

1.2.4 Painters

Portugal
Caetano Aeronautic Salvador; SATA; OGMA; TAP; LAUAK; Optimal; AcoSiber

Poland
MTU Aero Engines, Pratt & Whitney Rzeszów, PLZ Mielec Sikorsky Company, Northern Aerospace Sp. z o.o., PWR, PZL Świdnik – Leonardo Helicopters Company

Spain
TECNIPANT; UMI Aeronáutica

1.2.5 Computer Numerical Control (CNC) Operator

Portugal
CEiiA; LAUAK, Mecachrome; EMPORDEF TI; OGMA; Caetano Aeronautic (?); Thales; Altran; Active Space Technologies Technologies; UAVision AeronauticsAeronautics; TEKEVER; OPTIMAL; Procut; Air Olesa; Iberomoldes GroupGroup; Embraer; Grupo Pinto Brasil; Ricardo & Barbosa; Karmann Ghia dePortugal; Kristaltek - Laser e Mecânica de Precisão; Edaetech – Engenharia e Tecnologia"

Poland
MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, GOODRICH AEROSPACE POLAND SP. Z O.O., Pratt & Whitney Rzeszów, MB Aerospace Rzeszów Sp. z o.o., Pratt&Whintey Kalisz, Pratt&Whitney Tubes, Collins Aerospace

Spain
UMI Aeronáutica; NOVALTI; ASTORKIA; Talleres Aratz;

1.2.6 Electronics / Electrical Technician

Portugal
Active Space Technologies Technologies; Thales; LusoSpace

Poland
Becker Avionics Polska sp. z o.o., Pratt&Whitney Poland - Pratt & Whitney Rzeszów, Pratt & Whitney AeroPower, MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, Royal-Star Aero, PZL Świdnik – Leonardo Helicopters Company

Spain
SENER;TECNOBIT; ACITURRI; AERODISA;

1.2.7 Cable Technicians

Portugal: OGMA; NOVACABLE; Cablotec
Poland: EME Aero Eninge Maintenance Europe, Royal-Star Aero
Spain: ITP Aero

1.2.8 Tool, Jig and Fixture Maker

Portugal
LAUAK; Embraer; Mecahers Aeronautica; OGMA; Optimal; Omnidea; Procut; Motofil Aeronáuticafil Aeronáutica Aeronautics; Active Space Technologies; CODI; Air Olesa; ver lista tools and machines PEMAS

Poland
EME Aero Engine Maintenance Europe, Pratt&Whitney Poland (Rzeszów, Kalisz)

Spain
UMI AERONAUTICA; Aernnova Aerospace; ASTORKIA

1.2.9 Materials Engineer

Portugal
OGMA, LAUAK, Mecahers Aeronautica; Caetano Aeronautic; Mecachrome; LAUAK; INEGI; CEiiA; Active Space Technologies; Critical Materials; CODI

Poland
MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, GOODRICH AEROSPACE POLAND SP. Z O.O., Pratt & Whitney Rzeszów, MB Aerospace Rzeszów Sp. z o.o., Collins Aerospace (UTC Aerospace Systems Wrocław Sp. z o.o.), Pratt & Whitney AeroPower, Pratt&Whintey Kalisz,

Spain
UMI Aeronáutica; Aernnova Aerospace; Alestis; ASTORKIA; GRUPO TTT; ACITURRI; ITPAero; NOVALTI

1.2.10 Production/Manufacturing Engineer

Portugal
OGMA, LAUAK, Mecahers Aeronautica; Caetano Aeronautic; Mecachrome; Embraer; Karmann Ghia de
Portugal; Procut; Air Olesa; Iberomoldes GroupGroup; Critical Materials; CODI; Edaetech – Engenharia e Tecnologia

Poland
MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, GOODRICH AEROSPACE POLAND SP. Z O.O., Pratt & Whitney Rzeszów, MB Aerospace Rzeszów Sp. z o.o., Pratt&Whintey Kalisz, Collins Aerospace, MTU AeroEngines , Pratt&Whitney Tubes, Collins Aerospace

Spain
Aciturri; UMI Aeronáutica; Alestis; Aernnova Aerospace; NOVALTI; ASTORKIA; SENER; Talleres Aratz; ACITURRI; ITPAero

1.2.11 NDT Technician

Portugal
OGMA; Caetano Aeronautic; Mecachrome; LAUAK; Mecaher; TAP; ISQ; SGS; EQS; BV; TUV Reilhnad

Poland
MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, GOODRICH AEROSPACE POLAND SP. Z O.O., Pratt & Whitney Rzeszów, MB Aerospace Rzeszów Sp. z o.o., Pratt & Whitney Rzeszów S.A, P&W Kalisz, Collins Aerospace,

Spain
UMI Aeronáutica; ITPAero

1.2.12 Quality Engineer

Portugal
OGMA, LAUAK, Mecahers Aeronautica; Caetano Aeronautic; Mecachrome; Karmann Ghia de Portugal; Procut; Air Olesa; Iberomoldes GroupGroup; TEKEVER; Active Space Technologies; LusoSpace; Critical Materials; CODI; Edaetech – Engenharia e Tecnologia

Poland
MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, GOODRICH AEROSPACE POLAND SP. Z O.O., Pratt & Whitney Rzeszów, MB Aerospace Rzeszów Sp. z o.o. , Pratt & Whitney AeroPower, P&W Kalisz,Royal-Star Aero, Pratt & Whitney Rzeszów S.A, Collins

Spain
UMI Aeronáutica; Aernnova Aerospace; NOVALTI; ASTORKIA; SENER; Talleres Aratz; ACITURRI; ITPAero

1.2.13 Process Engineer

Portugal
OGMA, LAUAK, Mecahers Aeronautica; Caetano Aeronautic; Mecachrome; Embraer; TAP; Karmann Ghia de Portugal; Motofil Aeronáutica; Critical Materials; CODI"

Poland
Pratt&Whitney Rzeszów, Pratt&Whitney Kalisz, MTU AeroEngines

Spain
Umi Aeronautica; Alestis Aerospace; NOVALTI; SENER; Talleres Aratz; ACITURRI; Aernnova Aerospace; ITPAero

1.2.14 Logistics Technician

Portugal
OGMA, LAUAK, Mecahers Aeronautica; Caetano Aeronautic; Mecachrome; Embraer; Karmann Ghia de Portugal; Procut; Air Olesa; Iberomoldes GroupGroup; CODI

Poland
MTU Aero Engines, Safran Transmission Systems, Aero Gearbox International, Lisi Aerospace, GOODRICH AEROSPACE POLAND SP. Z O.O., Pratt & Whitney Rzeszów, MB Aerospace Rzeszów Sp. z o.o., Royal-Star Aero, COLLINS AEROSPACE(UTC Aerospace Systems Wrocław Sp. z o.o.), PZL Warszawa-Okęcie S.A., Collins

Spain
UMI Aeronáutica; Aciturri; ITPAero; Aernnova Aerospace; NOVALTI; ASTORKIA; SENER; Talleres Aratz; ACITURRI

1.3.1 Aircraft Engine Technician

Portugal
OGMA; TAP; SATA

Poland
XEOS; MTU AeroEngines, PZL Warszawa-Okęcie S.A., Wojskowe Zakłady Lotnicze Nr 1 S.A. Oddział w Dęblinie, LS Technics Sp. z o.o, LINETECH S.A.

Spain
Aciturri; ITP Aero

1.3.2 Base Aircraft Maintenance Engineer (Licensed Engineers)

Portugal

TAP; SATA; NORTÁVIA; OGMA; Louro Aeronaves e Serviços; Portugália; AEROMEC; H.T.A. Helicópeteros; Babcock Mission Critical; AEROHÉLICE; AEROTÉCNICA; HELISUPORTE; MESA; AVIOMETA; SATA Air Açores; HELIBRAVO; IAC; ESEFFLY; SOFINARE; EuroAtlantic Airways; In Flight Solutions; Airjetsul Aviation; HeliAvionisLab; Everjets; SPdH; Kleenplus; G Air II Maintenance; AEROEQUIPO; VINAIR Technics; EIAVIÓNICOS

Poland

EME Aero Engine Maintenance Europe, PZL Warszawa-Okęcie S.A., Wojskowe Zakłady Lotnicze Nr 1 S.A. Oddział w Dęblinie, LS Technics Sp. z o.o, LINETECH S.A.

Spain

BABCOCK MISSION CRITICAL SERVICES ESPAÑA; MANTENIMIENTO E INGENIERÍA AERONÁUTICA DEL ATLÁNTICO SUR; IBERIA; AIR EUROPA; HELISWISS IBERICA; VIAJES CENTER VOL; TRABAJOS AÉREOS ESPEJO; HABOCK SERVICE & SUPPORT; GESTAIR MAINTENANCE SLU; CFAC-SABADELL; FAASA AVIACION; AIR NOSTRUM; HISPANICA DE AVIACION; SWIFTAIR; GLOBALIA; SERVICIOS Y ESTUDIOS PARA LA NAVEGACIÓN AÉREA Y LA SEGURIDAD AERONÁUTICA; REAL AEROCLUB DE GRAN CANARIA; AVIONES, PIEZAS Y ACCESORIOS; AERONAVES DEL NOROESTE; AVIALSA T-35; ASPA; CORPORACION YGNUS AIR; ZOREX; FLIGHTLINE; EXECUTIVE AIRLINES; FLIGHT TRAINING EUROPE; SINMA AVIACION; CLIPPER NATIONAL AIR; STC AVIATION SERVICES; PANAMEDIA; FUTURHANGARS; ISLAS AIRWAYS; AIRBUS HELICOPTERS ESPAÑA; ÁLAMO AVIACIÓN; AEROFLOTA DEL NOROESTE; SKY HELICOPTERS; SERAIR TRANSWORLD PRESS; AIRCRAFTTECH; AERONÁUTICA DELGADO; BCP AEROTECNICS; ICARUS MANTENIMENT; FISAC AVIATION; HELIWORLD COMPAÑÍA AEREA; INTERCOPTERS; SOCIEDAD AERONAUTICA PENINSULAR; AERODYNAMICS MALAGA; SERVICIOS AÉREOS EUROPEOS Y TRATAMIENTOS AGRÍCOLAS; CENTRO AEREO IBER; CAT HELICOPTERS; AERO LINK SERVICES; HELITRANS PYRINEES; ROTORSUN; ROSIQUE AIRCRAFT; GESTAIR; STC AVIATION MAINTENANCE; ATLAS EXECUTIVE AIR; CESSNA SPANISH CITATION SERVICE CENTER; AVINTAIR; AERUM AVIATION GROUP; SERVICIO DE MEDIOS AEREOS DEL CUERPO NACIONAL DE POLICIA; DIRECCIÓN GENERAL DE TRAFICO UNIDAD DE HELICOPTEROS; ATS AVIATION; ROEDER IBERICA; SERVICIOS AEREOS DEL PIRINEO; BIGAS GRUP HELICOPTERS; FUNDACIÓN REGO; GLOBAL AERONAUTICS SOLUTIONS; GRUP AIR-MED; GRUP AIR-MED.

1.3.3 Airworthiness Engineer

Portugal

White Airways; Airnimbus; TAP; SATA; Netjets; Vinair; HeliPortugal; PGA Airlines; Helibravo; OMNI; H.T.A.; Babcock Mission Critical Services; EuroAtlantic Airways; AirJetsil Aviation; Masterjet; Helitours Douro; Hifly; Aerovip; Orbest; United Jet Services; Nortávia; Valair; IAC; Avitrata; Dunas; PHS; AEROPLANO; LEASEFLY; OGMA; MADJET; Everjets; AEROPILOTO; EJME; JET CAPITAL

Poland

Civil Aviation Authority (Poland), LS Technics Sp. z o.o

Spain

AERO LINK; AEROCENTER ESCUELA DE AVIACIÓN; AEROCLUB BARCELONA-SABADELL; AERODYNAMICS MALAGA; AEROFLOTA DEL NOROESTE; AERONAUTICA DEL GUADARRAMA; AERONÁUTICA DELGADO; AERONAVES DEL NOROESTE; AERONOVA; AEROTEC ESCUELA DE PILOTOS; AERUM; AIR EUROPA; AIR NOSTRUM; AIR TAXI & CHARTER; AIRBUS DEFENCE AND SPACE; AIRBUS HELICOPTERS; AIRWORTHYNEXT; ALAMO AVIACIÓN; ALBA STAR; ALPHA-AVIATION; ASL AIRLINES SPAIN; ATLAS EXECUTIVE AIR; AURA AIRLINES; AVEMA PLUS (AVIATION ENGINIEERING MANAGEMENT PLUS); AVIALSA T-35; AVIATION ISLAND; AVIATION VIP; AVIGEST SOLUCIONES AERONAUTICAS; AVINTAIR; BABCOCK MISSION CRITICAL SERVICES ESPAÑA; BCP AEROTECNICS; BIGAS GRUP; BINTER CANARIAS; BROKAIR CONSULTING; CAMO & MANAGEMENT; CANARIAS AIRLINES; CANARY FLY, CANARIAS AIRLINES; COMPAÑIA DE AVIACION; CANARY FLY; CAT HELICOPTERS;CENTER VOL MAINTENANCE; CENTRO AEREO IBER; CES AVIATION; CLIPPER NATIONAL AIR; CLUB DE VOL A VELA D'IGUALADA-ODENA; COMPAÑIA OPERADORA DE CORTO Y MEDIO RADIO IBERIA EXPRESS; CORPORACIÓN YGNUS AIR; COYOTAIR; DÉDALO AVIACION; DIRECCION GENERAL DE TRAFICO UNIDAD DE HELICOPTEROS; EUROAIRLINES; EVELOP AIRLINES; EXECUTIVE AIRLINES; FAASA AVIACION; FLIGHT TRAINING EUROPE; FLIGHTLINE; FLYING CIRCUS; FUNDACION REGO; FUNDACION REGO; GESTAIR; GLOBAL AERONAUTICS SOLUTIONS; GRUP AIR MED; HABOCK AVIATION; HELIPISTAS; HELISWISS IBERICA; HELITRANS PYRINEES; HELIWORLD COMPAÑÍA AEREA; HISPANICA DE AVIACIÓN; IBERIA; INITIUM AVIATION; INSTITUT CARTOGRAFIC I GEOLOGIC DE CATALUNYA; ITAER INGENIERIA; MARTINEZ RIDAO AVIACIÓN; ONE AIRWAYS; PANAMEDIA SLU; PLUS ULTRA LINEAS AEREAS; PRIVILEGE STYLE; REAL AEROCLUB DE GRAN CANARIA; REAL AEROCLUB DE TOLEDO; ROSIQUE AIRCRAFT; ROTORSUN; SAGOLAIR TRANSPORTES EJECUTIVOS; SERAIR TRANSWORLD PRESS; SERVICIO DE MEDIOS AEREOS DEL CUERPO NACIONAL DE POLICIA; SERVICIOS Y ESTUDIOS PARA LA NAVEGACIÓN AÉREA Y LA SEGURIDAD AERONÁUTICA; SINMA AVIACION; SKY HELICÓPTEROS; SOCIEDAD AERONAUTICA PENINSULAR; SWIFTAIR; TRABAJOS AEREOS ESPEJO; TURISVOL; ULTRAMAGIC; URGEMER CANARIAS; VOLOTEA; VUELING AIRLINES; WAMOS AIR; ZOREX.

2.1.1 Line Aircraft Maintenance Engineer (Licensed Engineers)

Portugal

TAP; SATA; NORTÁVIA; Louro Aeronaves e Serviços; Portugália; AEROMEC; H.T.A. Helicópeteros; Babcock Mission Critical; AEROHÉLICE; AEROTÉCNICA; HELISUPORTE; MESA; AVIOMETA; SATA Air Açores; HELIBRAVO; IAC; ESEFFLY; SOFINARE; EuroAtlantic Airways; In Flight Solutions; Airjetsul Aviation; HeliAvionisLab; Everjets; SPdH; Kleenplus; G Air II Maintenance; AEROEQUIPO; VINAIR Technics; EIAVIÓNICOS

Poland

AS Airport Services, Welcome Airport Services sp. z o.o., LS Technics

Spain

BABCOCK MISSION CRITICAL SERVICES ESPAÑA; ASL AIRLINES SPAIN; MANTENIMIENTO E INGENIERÍA AERONÁUTICA DEL ATLÁNTICO SUR; IBERIA; AIR EUROPA; HELISWISS IBERICA; VIAJES CENTER VOL; TRABAJOS AÉREOS ESPEJO; HABOCK SERVICE & SUPPORT; GESTAIR MAINTENANCE SLU; CFAC-SABADELL; FAASA AVIACION; AIR NOSTRUM; HISPANICA DE AVIACION; SWIFTAIR; GLOBALIA; SERVICIOS Y ESTUDIOS PARA LA NAVEGACIÓN AÉREA Y LA SEGURIDAD AERONÁUTICA; REAL AEROCLUB DE GRAN CANARIA; AVIONES, PIEZAS Y ACCESORIOS; AERONAVES DEL NOROESTE; AVIALSA T-35; ASPA; CORPORACION YGNUS AIR; ZOREX; FLIGHTLINE; EXECUTIVE AIRLINES; FLIGHT TRAINING EUROPE; SINMA AVIACION; CLIPPER NATIONAL AIR; STC AVIATION SERVICES; PANAMEDIA; FUTURHANGARS; ISLAS AIRWAYS; AIRBUS HELICOPTERS ESPAÑA; WAMOS AIR; JET AIRCRAFT SERVICES; ÁLAMO AVIACIÓN; AEROFLOTA DEL NOROESTE; SKY HELICOPTERS; SINAER; SERAIR TRANSWORLD PRESS; HISPANO-LUSITANA DE AVIACIÓN; AIRCRAFTTECH; AERONÁUTICA DELGADO; BCP AEROTECNICS; ICARUS MANTENIMENT; FISAC AVIATION; HELIWORLD COMPAÑÍA AEREA; TOTAL AVIATION SERVICES; INTERCOPTERS; SOCIEDAD AERONAUTICA PENINSULAR; AERODYNAMICS MALAGA; Servicios Aéreos Europeos y Tratamientos Agrícolas; CENTRO AEREO IBER; CAT HELICOPTERS; AERO LINK SERVICES; Helitrans Pyrinees; CANARY FLY; BROKAIR CONSULTING; ROTORSUN; DÉDALO AVIACION; Rosique Aircraft; Servitec; GESTAIR; SKY TECH; SERVICIOS AEROTÉCNICOS INSULARES; STC AVIATION MAINTENANCE; ATLAS EXECUTIVE AIR; CESSNA SPANISH CITATION SERVICE CENTER; AVINTAIR; URGEMER CANARIAS; AERUM AVIATION GROUP; ASESTAIR INNOVA; SERVICIO DE MEDIOS AEREOS DEL CUERPO NACIONAL DE POLICIA; DIRECCIÓN GENERAL DE TRAFICO UNIDAD DE HELICOPTEROS; ATS AVIATION; ROEDER IBERICA; SKYLINE MAINTENANCE SPAIN; SERVICIOS AEREOS DEL PIRINEO; BIGAS GRUP HELICOPTERS; FUNDACIÓN REGO; GLOBAL AERONAUTICS SOLUTIONS; VOLOTEA; GRUP AIR-MED; GRUP AIR-MED

2.2.1 Baggage Agent and 2.2.2 Cargo Agent

Portugal
SATA; Groundforce; Portway; Lufthansa; Omni Handling; Portway ; PTS- Portugal Turismo Serviços; Ryanair; Safeport; Aero Vip; AirJetsul; Omni; Hi Fly; Groundway

Poland
AS Airport Services, Welcome Airport Services sp. z o.o., LS Technics

Spain
Atlantica; Groundforce; Acciona; Aviapartner; Iberia; Swissport Handling; WFS

2.2.3 Ramp Agent

Portugal
SATA; Groundforce; Portway; Lufthansa; Omni Handling; Portway ; PTS- Portugal Turismo Serviços; Ryanair; Safeport; Aero Vip; AirJetsul; Omni; Hi Fly; Groundway

Poland
Gdansk International Airport, Fryderyk Chopin Airport, Rzeszow Jasionka International Airport, Katowice Airport, Welcome Airport Services sp. z o.o.

Spain
Atlantica; Groundforce; Acciona; Aviapartner; Iberia; Swissport Handling; WFS

2.2.4 Passenger Agent

Portugal
SATA; Groundforce; Portway; Lufthansa; Groundlink; Hifly; Inflight Solutions III - Ground Services Portugal; I-SEC International Security Portugal; Janeiro-Inflight Services; Lufthansa Ground Services Portugal; Omni Handling; PTS- Portugal Turismo Serviços; Ryanair; Safeport Serviços Handling; United Airlines; TAP; Servisair Portugal; Sky Valet; Jet2.Com; JC Aircraft Maintenance; Safeport Serviços Handling; Aero Vip; AirJetsul; Groundway;

Poland
AS Airport Services, Welcome Airport Services sp. z o.o., LS Technics

Spain
Atlantica; Groundforce; Acciona; WFS; Aviapartner

2.2.5 Aircraft Marshaller

Portugal
Groundforce; Portway; Euroatlantic; Ryanair; Safeport; SPDH; Sky Valet; DHL Aviation; HIFLY

Poland
Gdansk International Airport, Fryderyk Chopin Airport, Rzeszow Jasionka International Airport, Katowice Airport, Welcome Airport Services sp. z o.o.

Spain
Atlantica; Groundforce; Acciona; Aviapartner; Iberia; WFS

2.2.6 Aircraft Refueler Technician

Portugal
BP; British Airways; HIFLY; Iberia; Omni-handling; Oz Energia Jet; Petrogal; Repsol Abast. Serviços à Aviação; TAP; TAAG; JC Aircraft Maintenance; Louro Aeronaves; PTS; Saba; SPDH; Nortávia; Grupo Operacional de Combustíveis do Aeroporto de Lisboa

Poland
Airports - Gdansk International Airport, Fryderyk Chopin Airport, Rzeszow Jasionka International Airport, Katowice Airport,

Spain
Iberia Airport Services; Menzies Aviation; Swissport; Aldeasa; Acciona; CLH Aviación SLCA

2.2.7 Airport Security Specialist

Portugal
ANA-Aeroportos de Portugal

Poland
Airports - Gdansk International Airport, Fryderyk Chopin Airport, Rzeszow Jasionka International Airport, Katowice Airport,

Spain
AENA

2.2.8 Airport Safety Specialist

Portugal
ANA-Aeroportos de Portugal

Poland
Airports - Gdansk International Airport, Fryderyk Chopin Airport, Rzeszow Jasionka International Airport, Katowice Airport,

Spain
AENA

2.2.9 Screening Officers (persons, baggage, items carried)

Portugal
Securitas

Poland
Private Security Company responsible by polish airports

Spain
Ilunion; Eulen; Trablisa; Segurisa; Desierto; ICTS

2.2.10 Flight dispatcher

Portugal
Airports, Airlines

Poland
Airports, Airlines

Spain
Atlantica; Groundforce; Acciona; Aviapartner; Iberia

2.3.1 Flight Attendant

Portugal
TAP, SATA

Poland
Polskie Linie Lotnicze LOT, Emirates, Enter Air Sp. z o.o., Ryanair,

Spain
Iberia; Vueling

2.3.2 Airline Transport Pilot

Portugal
TAP; PORTUGÁLIA; EUROATLANTIC AIRWAYS; HI FLY

Poland
Ministry of Defence, PLL LOT, EuroLOT, EasyJet, Centralwings, Wizzair

2.3.3 Commercial Pilot

Portugal
EVERJET; BABCOCK; HELIBRAVO; INEM; FORÇA AÉREA PORTUGUESA; INEAER; TAESPEJO

Poland
Polish Airforce Academy, PLL LOT, EuroLOT

2.4.1 Accident and Incident Inspectors

Portugal
GEPIAAF

Poland
Państwowa Komisja Badania Wypadków Lotniczych

Spain
Comisión de Investigación de Accidentes e Incidentes de Aviación Civil, CIAIAC

2.4.2 Air Traffic Controller

Portugal
NAV

Poland
PANSA - Polish Air Navigation Services Agency

Spain
ENAIRE

2.4.3 Specialist Aviation Meteorologist

Portugal
IPMA

Poland
Urzędu Lotnictwa Cywilnego EN: Civil Aviation Authority (CAA)

2.4.4 Airway Transportation systems Specialist

Portugal
NAV

Poland
Polish Air Navigation Services Agency, Jeppesen Poland Sp. z o.o. a Boeing Company

Spain
ENAIRE

Careers

Kit

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