# WALTER LUIS PIGATIN

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### EXPERIENCE

### EMBRAER-EMPRESA BRASILEIRA DE AERONÁUTICA

## **Activity: Senior Product Development Engineer - Materials and Processes Engineering Specialist – Completion Aircraft**

### EMBRAER-LIEBHERR EQUIPAMENTOS DO BRASIL

## **Activity: Materials and Processes Engineering - Supervisor**

## From May/1988 until today

Main activities:

* Product Engineer in the following programs/aircrafts: cargo KC-390, executive jets Legacy 500 and Phenom 300 and commercial jets E175/190/195E2.
* Materials and Processes Engineering Supervisor in the design of landing gears, wheels and breaks, pylons and hydraulic components (valves, actuators, accumulators, etc.) of EMB-145, Legacy 600, EMB-170, EMB-190, EMB-312, ALX and AM-X airplanes and S-92 and Comanche helicopters.
* FAA/ANAC certification processes for commercial aircrafts.

Create, improve and adapt material specifications and process specifications:

* Engineering specification and qualification of metallic and nonmetallic materials.
* Engineering specification and manufacturing processes:
* heat treating of steels: annealing, normalizing, quenching, cold treating, tempering, stress relieving, solution heat treating and precipitation hardening.
* heat treating of aluminum alloys: annealing, solution treating and aging.
* thermochemical treatments: gas carburizing and nitriding in salt bath.
* surface treatments: cadmium plating, zinc-nickel alloy plating, chromium plating, zinc and manganese phosphate coating, passivation, electrolytic polishing, silver plating, chromic and sulfuric acid anodizing, phosphate-fluoride coating, chemical conversion coating, black oxide coating, electroless nickel plating, sulfamate nickel, epoxy and polyurethane painting, flame spraying (HVOF process) and PVD coatings.
* mechanical processes: shot-peening, blasting and plastic beads blasting.
* non destructive inspections: liquid penetrant, magnetic particles, ultrasonic, radiographic and surface temper etch inspections, electrical conductivity and eddy current.
* Mechanical forming by peen forming and creep aging forming and tube bending.
* TIG, FSW and brazing welding.
* Development of forgings, extrusions and castings.
* Mechanical and electrical hardware specifications.
* Product structure registering for MRP and SAP systems.
* Fracture surface analysis by SEM of failed aircraft components.
* Plan and execute audits of internal and external suppliers, prepare reports and follow up on corrective actions.
* Knowledge in mechanical tests such as tensile test, impact test, hardness test, stress-corrosion test, bending and fatigue tests and metallographic analyses of materials (optical, SEM and TEM microscopes).
* Knowledge of ASTM, AFNOR, DIN, MIL, FEDERAL SPECIFICATION, AMS, etc. standards.
* Knowledge of AS 9000 Quality System and ISO 14001 Environmental Control.
* Knowledge of Lean Manufacturing and Kaizen Philosophy.

#### ELECTRO AÇO ALTONA

Activity: Metallurgical Supervisor – Processes Engineering

From Jan/86 until Apr/88

Main activities:

* Research and development of new castings alloys such as wear-resistant steels, stainless steels and heat-resistant steels.
* Specification and qualification of welding procedures for casting steels.
* Heat treating specification of casting steels such as carbon steels, low alloy steels, stainless and heat-resistant steels and wear resistant steels.

#### SIDERÚRGICA N. SRA. APARECIDA

Activity: Trainee – Product Engineering

From Aug/82 until Feb/83

Work developed: Ca-Si injection in the oven during steel casting, in order to control inclusions morphology and, consequently, decrease the mechanical properties anisotropy.

#### EDUCATION

**Master of Science (M.Sc.)**

Conclusion: February/1988

Universidade Federal de São Carlos (UFSCar) São Carlos – SP

Thesis: Ïnvestigations about the niobium effect in the creep behavior of 18%Cr-12%Ni stainless steels”.

#### Materials Engineer

Area: metallurgy

Conclusion: July/1983

Universidade Federal de São Carlos (UFSCar) São Carlos – SP

**OTHER COURSES, EVENTS AND PUBLISHED PAPERS**

**Managing Courses**

* **Problem Analysis and Decision making -** Embraer
* **Advanced Topics in Project Management** – J2DA Consulting
* **Organizational Managing and Enterprising -** Embraer-Liebherr

## **Managing People Through Situational Lidership** – Nexus Consulting

* **Project Management -** Fundação Carlos Alberto Vanzolini

##### **Manager Development Program** – Embraer

* **Self Knowledge** – Embraer
* **Recycling Course of Leadership -** Embraer

**Technical Courses**

* **GD&T – General Dimensioning and Tolerancing** – Embraer
* **Catia V5** – Embraer
* **Safety Assessment of Aircraft Systems** – Program of Specialization in Engineering at Embraer
* **MS-Project** – ATPS Informatics

##### **Six Sigma** – **Green Belt** - Embraer

## **Aeronautical Certification** – Embraer

* **Suppliers Audit** – Embraer
* **II Balzers Seminary** – Balzers Balinit do Brasil
* **5S – Housekeeping** – Embraer
* **SAP R/3 System** – SAP Brasil Ltda
* **Plasma Nitriding** – UMC
* **Elastomeric Compounds and Fluorpolymers** – Du Pont do Brasil
* **Corrosive-inhibiting Protection of Metals** – FDTE
* **Plastic Materials Filled with Fibers** – PROPESA
* **Rubbers – Industrials Technical and Processes** – IMPROVEMENT
* **Coating Welding** – ABS
* **Weldability of High Tensile and Low Alloy Steels** – ABS
* **Quality Assurance in Welding** – ABS

**Events**

* **2011 AeroMat Conference & Exposition -** ASM International – Long Beach, California, USA

##### **2004 Aerospace/Airline Plating & Metal Finishing Forum–AESF** – Tulsa, Oklahoma, USA

* **2002 AeroMat Conference & Exposition – ASM International** – Orlando, Florida, USA
* **X Surface Treatments Brazilian Meeting** - EBRATS (2000)
* **2000 Aerospace/Airline Plating & Metal Finishing Forum** - Cincinnati, OH - USA
* **Brazil Corrosion 99 & 3rd Brazilian Atmospheric Corrosion Colloquium** – NACE (1999)
* **Interfinish Latino-Americano –** EBRATS (1997)
* **Aeronautical Painting** – Dexter Aerospace Materials Division/Atlanta-USA (1994)

**Published Papers**

#### 32 papers published in magazines and events related to surface treatments, mechanical and physical properties of materials and coatings, forgings, design of creep testing machines, etc.

Exemplos:

The Effect of WC-17Co Thermal Spray Coating by HVOF and Hard Chromium Electroplating on the Fatigue Life and Abrasive Wear Resistance of AISI 4340 High Strength Steel

Event: Corosion Reviews, England, 2003

Evaluation of an Electroless Nickel Plating Interlayer on the Fatigue and Corrosion Strength of Chromium Electroplated AISI 4340 Steel

Magazine: Plating and Surface Finishing, 2001

Hard Chromium Plating Microcracks: Effects in Fatigue Strength and Corrosion of 4340 Steel

Event: Chile, 2000

The Correlation Analysis of the Shot Peening Parameters with the Fatigue Strength of 4340 Steel

Event: China, Fatigue 1999

Effect of Tungsten Carbide Thermal Spray Coating Applied by HVOF Process and Hard Chromium Plating in the Fatigue Strength of 4340 Steel

Event: 5th International Conference on Advances in Surface Engineering – São Paulo – SP – 1998

#### Forgings in Aluminum Alloys for Landing Gears

Event: XII Seminário Nacional de Forjamento – Porto Alegre – RS (1993)

#### Creep Microstructures of 18%Cr-12%Ni-0.02%C Stainless Steels with Niobium

Event: Simpósio Brasileiro de Microscopia Eletrônica e Técnicas Associadas na Pesquisa de Materiais – São Paulo – SP (1998)

#### Prototype Machines for High Temperature Creep Testing of Metals

Event: II Encontro de Tecnologia e Utilização dos Aços Nacionais de UFRJ/COPPE – Rio de Janeiro – RJ (1987)

OTHER INFORMATION:

Experience in using personal computer softwares (Word, Excel, PowerPoint, MS Project, Lotus Notes and SAP).

English advanced.