



COMPLETE SOLUTION
FOR NDT / NDE
30
YEARS

NDT

QUALITY CONTROL

INFRARED THERMOGRAPHY

VISUAL TESTING

R&D

X-RAY

FPI

TESTING OF COMPOSITE STRUCTURES

COMPOSITES

REFERENCE BLOCKS

ET

COMPLETE SOLUTION

RTG

NDE

INSPECTION

PENETRANT TESTING

IRT

QUALIFICATION

INNOVATION

MRO

WRITTEN PRACTICE

LT

WHEELS

UT

TESTING & INSPECTION

PRODUCTION & EQUIPMENT

QUALIFICATION & CERTIFICATION

MAGNETIC PARTICLE TESTING

ULTRASONIC TESTING

TRAINING COURSES

PHASED ARRAY

NADCAP

OEM

UNIMAG

EASA PART 145

MANUFACTURING

DIGITAL RADIOGRAPHY

AEROSPACE CERTIFICATION

INDUSTRY

ADVANCED TECHNOLOGY GROUP

OUTSIDE AGENCY SERVICES



EN VERSION



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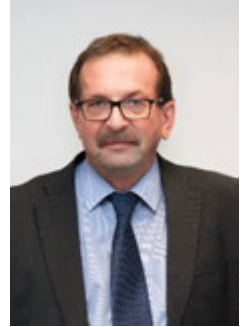
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INTRODUCTION

Dear customers,

ATG (Advanced Technology Group spol. s r.o.) as a founding member of ATG Group is celebrating 30 years on the market of NDT, welding, inspections and composites manufacturing. Through those 30 years ATG developed from a small, 5 person company working only on local (Czech) market to international group of companies, a top producer of NDT equipment (especially in MPI and FPI), with qualification center known for its superior lecturing qualities, and one of the big inspection organizations working worldwide. LA Composite, the first subsidiary and the biggest one up till today, managed to become monopoly supplier to several aerospace primes, most notably AIRBUS. The fact we are still on the market is a positive sign reflecting years of company development focused on innovation, product diversification and especially stable customer base, that, we hope, is caused by our flexibility, innovation, reliability and honest approach.



The goal of ATG Group to maintain longtime cooperations – to be a reliable partner to our old as well as new customers. There is still a lot to improve to provide more thorough support to our customers. If you, our customers, will be successful with our products (either equipment or services) than even us, ATG company and the whole ATG Group, shall be successful with you. In upcoming years ATG Group therefore wants to focus on expanding its product delivery to cover more broad scope that shall bring more value added to its customers.

We all went through a turbulent period. Especially the last 2 years were difficult to all of us due to the coronavirus pandemic, drop of sales in OEM market and recent situation in Ukraine resulting in changes of geopolitical stability. Nevertheless, ATG Group believes and hopes the human nature is to survive, live in piece, and find agreements. The turbulent period will be overcome and culminate to a new period of stability and prosperity.

I am looking forward for mutual cooperation and meeting with you in the future.

Zbynek Zavadil
President of ATG Group

A handwritten signature in blue ink, appearing to be 'Z. Zavadil', written over a horizontal line.

ATG GROUP

ATG Group is the **unity** of companies with one corporate identity and ownership held by the parent company ATG Ltd. (ATG Prague) Members of the ATG Group **follow the same Corporate Mission, Vision and Strategies**, as well as **praise the same Core values**, that are based on centralized Quality Assurance.

The executives of the ATG Group are centralized in ATG Prague and they are **the guarantee of one unified approach to the Special Processes** of the whole ATG Group for all potential customers.

All members of the ATG Group provide their customers with complete solution for NDT and related Special Processes that means both, products and services, related to their industrial field. This may be applied inside one member company (i.e. products and services for NDT in ATG Prague) as well as across more ATG Group members (i.e. production of composites in LAC and NDT testing of composites in ATG Prague).

Close interaction of all the Group members ensures for the customer that the activities not provided by the local member can be supplemented by other, adequate member on Customer's request.

In addition to the ATG Group members, there is a broad range of partners and distributors directly cooperating with ATG Group in their respective regions. Achieved synergy between these organizations is used for the benefit of the Customer by extended distribution abilities and ATG Group's product support.



MISSION

Maximize operational safety of industrial products **by top level quality** of industrial inspections.

VISION

Be a **financially strong, technology company** operating on the **international scale** in the area of industrial inspections, ensuring the quality of Customer's products by implementing the complete solution of **advanced technologies, products and services**, based on the **latest technical trend and development**.

CORE VALUES

Honesty → Responsibility → Expertise → Quality → Integrity → Flexibility → Innovation

CORPORATE STRATEGIES

- Complete solution for the Special Processes, always fully in accordance with Customer's specific requirements
- Implementation of both products and services as the two inseparable parts of the Special Processes
- Global approach, ensuring for the customer integrity with international standards

ATG GROUP PRODUCT PORTFOLIO

ATG Group provides complete solution for NDT by implementing both products and services in all standard NDT methods and other related Special Processes.

The product portfolio ranges from single devices up to complete solutions involving implementation of complex NDT systems using several NDT methods, personnel qualification of the operators and establishment of the whole NDT process including accompanying processes at the shopfloor.

PRODUCTION AND EQUIPMENT

Scope of work

- Job-shop production of **customized**, automated / semi-automated / manual **NDT systems** for testing of robust, difficult or non-standard parts
- Batch production of **standardized** automated / semi-automated / manual **NDT devices** for testing of standardized or widely used parts
- Mass production of equipment, tools and gauges
- Solution of accompanying processes (e.g. water / surface treatment etc.)

Target segment

- Testing of batch or mass-produced components for transport and energy industry and machinery
- Suitable for each stage of the production process
- MT, PT, UT, ET, RT, iVT and LT methods of NDT process

QUALIFICATION AND CERTIFICATION

Scope of work

- **Independent qualification and certification** for NDT Plant and Welding Inspection
- **Employer qualification and certification** for NDT and Welding and Third-Party Inspection
- All **standard NDT methods** in all levels (1/2/3) and all relevant product / industrial sectors
- Specialized NDT methods (IRT, TCS, EI)
- **Specialized NDT techniques** (Phased Array, TOFD, UT-SWT, Digital and Computed Radiography, ECA)
- **Practical part** of the training as the principal feature

Target segment

- Production quality assurance personnel
- Maintenance quality assurance (inspection) personnel
- Aerospace qualification acc. to EN4179/NAS410

TESTING AND INSPECTION

Scope of work

- **Individual testing** of low-count products in ATG facility by internal staff, including professional problem analysis and proposal of technical solution
- Inspection in production facilities (ASME, PED, shop/site inspection)
- Maintenance / devices under operation inspection activities (RLA, RBI)
- **Mass testing** of Customer's products on ATG devices by outsourcing of a qualified staff as one of the principle approaches to complete solution for NDT
- **ATG Special Process House** – provision of whole process in MT, PT, RT, UT and cleaning processes

Target segment

- Testing for aerospace and automotive industry
- Inspection in petrochemical and energy industry

OUTSIDE AGENCY SERVICES

Scope of work

- Implementation of the whole NDT process into the Customer's facility
- Services of NDT Level 3
- Design of Quality Management System for NDT
- Personnel qualification by Customer's Written Practice
- Supervised collection of experience before certification
- Auditing of NDT process
- Performance evaluation of NDT personnel
- Proficiency testing of NDT labs acc. to ISO/IEC 17043
- Audit support for NADCAP, EASA, TPG and ASME

Target segment

- Mass-production facilities with internal NDT test sites operating in especially aerospace industry
- Support for implementation of NDT process during NADCAP, EASA, TPG and ASME approvals

STRUCTURE OF ATG GROUP AND ITS PARTNERS

ATG Group is the most active in regions of Europe, Asia, Middle East and Far East and the structure of ATG Group is designed to cover their regional needs. In the last year ATG Ltd. also actively entered to the region of Australia and Oceania. All members follow the same principle of the company – **deliver the complete solution of both products and services for special processes.**

ATG Group uses the cultural and geographical diversity of its members and partners as an advantage and cooperates on many international projects in order to deliver the best technical solution for the Customer. As a result ATG Group operates with their activities almost all around the World.

Company name	Share*	Production	Services	City	Country
ATG Ltd.	100%	X	X	Prague	Czech Republic
LA Composite	100%	X	X	Prague	Czech Republic
ATG Slovakia	59%	X	X	Trencin	Slovakia
PK-Q	50%		X	Prague	Czech Republic

*share of the mother company ATG Ltd. in given daughter company in January 2022

TRAINING CENTERS OF ATG GROUP

In addition to the net of member companies, ATG Group has several training centers that are focused on personnel qualification in NDT as one of the major sources of company revenue. These centers are supported through local partner organizations in Europe, Africa and Asia.

PARTNERS OF ATG GROUP

Last but not least, ATG Group also cooperates with a tens of partners from all around the World that ensure coverage of ATG products around the World. These partners may include distributors, inspection agencies, freelancers and many others.



HISTORY OF ATG GROUP

Year	Milestones
1992	<ul style="list-style-type: none"> ■ Establishment of ATG, Ltd.
1993	<ul style="list-style-type: none"> ■ Definition of target production area: <ul style="list-style-type: none"> ■ Fluorescent penetrant inspection lines (FPI) ■ Magnetic-particle inspection lines (MPI) ■ Ultrasonic Testing manipulators ■ Establishment of Production Department (first FPI line for Letov and MPI line for AERO) ■ Personnel qualification for all standard NDT methods (ET, LT, MT, PT, RT, UT, VT) ■ Approved Training Center for SECTOR Cert GmbH
1995	<ul style="list-style-type: none"> ■ Establishment of APC (Association for Personnel Certification), Inc. independent certification body ■ Establishment of the first subsidiary (that time joint-venture of ATG and Letov), the LA Composite
1997	<ul style="list-style-type: none"> ■ Establishment of QC Pilsen, that time only ISO 9712 / EN 473 Examination Center in the Czech Republic
1999	<ul style="list-style-type: none"> ■ First UT tank for aerospace (turbine disks testing) ■ Start of activities in Russian Federation
2000	<ul style="list-style-type: none"> ■ Approval by CWS ANB for European / International Welding Inspection (EWI/IWI) qualification
2001	<ul style="list-style-type: none"> ■ First automated combined UT – MT NDT system ■ Cooperation with Hartford Steam Boiler in industrial inspections (ASME Code, PED)
2002	<ul style="list-style-type: none"> ■ Establishment of ATG Slovakia, Ltd., the first subsidiary abroad
2003	<ul style="list-style-type: none"> ■ Approval of Czech National Aerospace NDT Board (Czech NANDTB) for EN 4179 / NAS 410
2004	<ul style="list-style-type: none"> ■ Start of activities in Gulf region
2006	<ul style="list-style-type: none"> ■ Approval of EASA Part 145 (Process D1)
2008	<ul style="list-style-type: none"> ■ UNIMAG 13000 AC/AC, one of the biggest MPI system on the world, produced for SIEMENS
2009	<ul style="list-style-type: none"> ■ First fully automated FPI line for Strojmetal Kamenice, Inc. ■ Approval of American Petroleum Institute (API) for TPCP program
2010	<ul style="list-style-type: none"> ■ First of UNIMAG Aerotester series with unique Quick Break technology in accordance with ASTM E1444 ■ Establishment of ATG Cert, independent, non-accredited certification body
2011	<ul style="list-style-type: none"> ■ Sale of QC Pilsen, Inc., independency in qualification and certification acc. to EN 473 / ISO 9712 (NDT) ■ First ET manipulator for aerospace (testing of wheels) ■ Approval of ATG Cert Examination Center by Reaktortest ■ Approval by TÜV Nord Systems and TÜV Nord Czech for ISO 9712 / EN 473 qualification system (Training center and Examination Center)
2012	<ul style="list-style-type: none"> ■ Approval by Ministry of Oil, Iraq – ATG is the only NDT qualification provider for MMO, Iraq
2013	<ul style="list-style-type: none"> ■ Approval by KIWA Inspecta (Inspecta Latvia) for ISO 9712 / EN 473 qualification system Czech Accreditation Institute accreditation for interlaboratory proficiency testing of NDT labs
2014	<ul style="list-style-type: none"> ■ Approval by AWS for CWI and CRI qualification and certification system ■ Approval by Russian National Aerospace NDT Board for EN 4179 / NAS 410 NDT personnel qualification
2015	<ul style="list-style-type: none"> ■ Establishment of Special Process House for mass NDT testing in MT and PT methods ■ NADCAP accreditation of Special Process House for its FPI water-washable penetrant inspection process
2016	<ul style="list-style-type: none"> ■ NADCAP accreditation of Special Process House for its MPI and UT inspection processes ■ Delivery of so far the biggest FPI line to VSMPO Verchnjaja Salda for aerospace industry ■ Reconstruction of the ATG headquarters in Prague
2017	<ul style="list-style-type: none"> ■ UNIMAG 14000 AC/AC, one of the biggest MPI system on the world, testing crankshafts for MAN, Siemens, Vartsilla a Mitsubishi Heavy Industry
2018	<ul style="list-style-type: none"> ■ Special MPI bench UNIMAG 2600 AC/AC/AC for testing of railway axles with installed gearbox ■ New Advanced Wheeltester AWT 950 NG for testing of aerospace wheels with conveyor integration ■ Approval by GE Aviation Czech for cleaning and cleanliness verification process ■ ATG representative accepted to the ASME committees for NDT personnel qualification acc. to ANDE-1
2019	<ul style="list-style-type: none"> ■ First intelligent VT system with automatic defect recognition rfor automotive industry ■ Portable RTG source FOKUS and digital detector ScanRay
2021	<ul style="list-style-type: none"> ■ First delivery of an FPI line to the region of Australia and Oceania

IMPORTANT NEWS

ATG's long-term goal is to increase the volumes of NDT products throughout outsourcing and increased reproducibility and traceability of performed NDT. This principle is applied in both, provided services and designed and produced equipment.

The goal of ATG Group is to deliver complete solution for NDT, either by implementation of whole process including equipment at the customer's facility, or by outsourcing of customer's NDT process to the premises of ATG Group. News of the year 2019-2021 is further developing this idea by new applications ATG can offer it to its customers.

PRODUCTION AND EQUIPMENT

First intelligent VT system (INDUSTRY 4.0) for fully automated testing and defect recognition on bearings

In 2019 ATG developed and successfully delivered its first fully automated system iVT-B1 for visual testing with Automatic Defect Recognition (ADR). iVT-B1 is designed for automatic visual testing of 100% of outer as well as inner surface of bearings with takt time of just 11 sec, including the faces and signatures.



That all is delivered with registration level of just 0,1 mm for defects like scratches, pressure marks, corrosion, burnouts and others. The core of the system is **within precise manipulation, cameras, lights, software with „deep learning“ capabilities and user interface. System is equipped with automated sorting for OK and NOK parts and anti-corrosion conservation of bearings.**

New semi-automated UNIMAG WST for testing of railway wheelsets

In 2021 ATG delivered its first UNIMAG WST system for testing of railway wheelsets acc. to VPI 09, that significantly increases the productivity (from 60 min to 18 min/pc), quality and testing reliability in railways industry. Delivered equipment includes a system of intergated mirrored coils of various types for magnetizing of the wheels, rail contact surface, hubs and axles. Lifting with wheelset rotation and collection of magnetic suspension is used for manipulation purposes. System can be further equipped by tools for magnetizing of axles only, including current flow. In this particular case the system was delivered also with a design for construction adjustments.



New UNIMAG Aerotester NG family was introduced to serial production

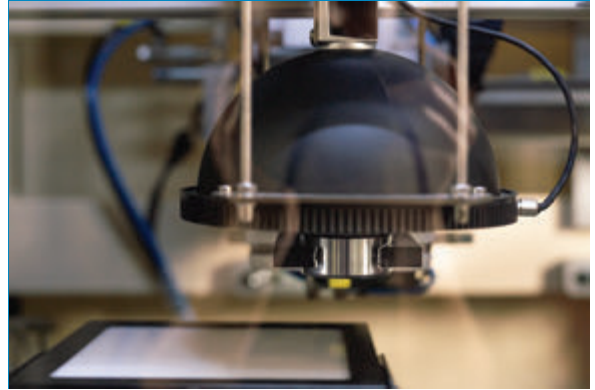
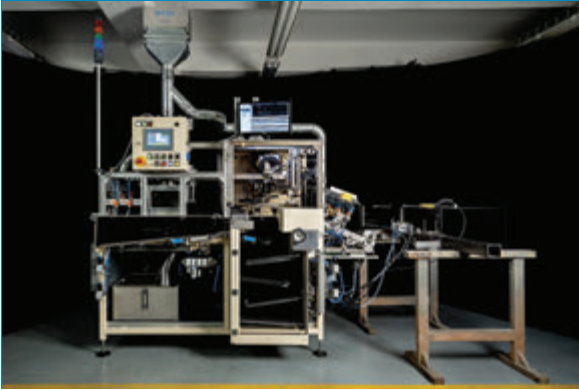
UNIMAG Aerotester NG series is a long expected upgrade of successful family of horizontal MPI benches UNIMAG Aerotester, that are currently used in many MRO and OEM aerospace facilities all around the World. The equipment is manufactured from stainless steel, has minimal footprint due to placement of switchboards under the bench and foldable cabin. It has integrated modern electronics for precise control of AC, HWDC and 3xFWDC currents and satisfy requirements of ASTM E1444 as well as End User specifications like Boeing, Rolls Royce, P&W, GE Aviation, Honeywell and many others. Equipment is provided with 5% duty cycle in two power setups (FWDC 6 kA, or 10 kA), clamping length up to 1400, 3000 and 4200 mm and coil diameter of 300, 400, 500 or 630 mm.



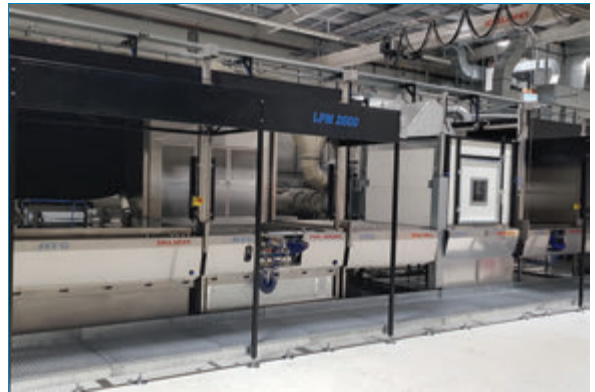
LPM 2600 MAX, the first FPI line delivered to Australia (Brisbane), designed for civil and military aerospace industry

Despite restrictions joint with COVID 19 and compulsory 14 days quarantine for the whole installation team ATG designed, produced and at the beginning of 2021 successfully installed its first FPI line in the region of Australia and Oceania. The delivered system is LPM 2600 MAX for a company in Brisbane that focuses on MRO in civil as well as military aviation (RAAF). The FPI line will be primarily used for MRO of J135 engines for the newest fighter jet F-35 Lighting II.

The line is manufactured from stainless steel, with dimension of each position 1550 x 1550 mm. Application of various types of penetrants is either by immersion or by electrostatic spraying. Movement of parts is possible either on roller track or by a crane. Equipment includes powerful oven and application of developer by electrostatic spraying. Both white light and UV lights is handled by LED and powerful ventilation ensure comfortable conditions for operating personnel.

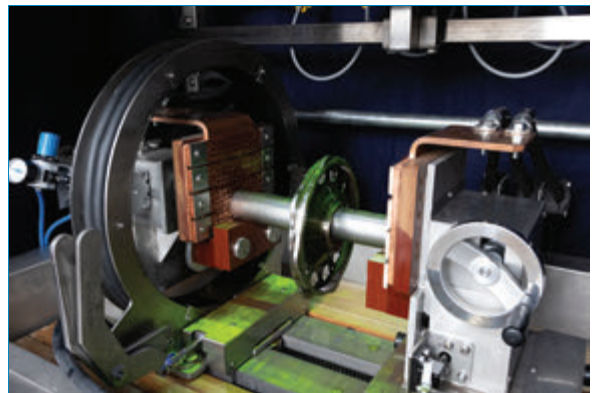
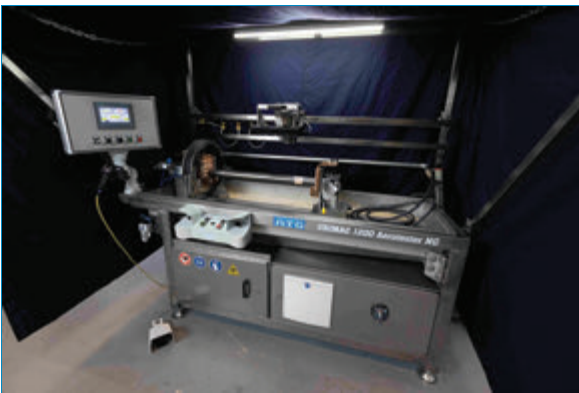


INTELLIGENT VISUAL SYSTEM IVT B-1 FOR TESTING OF BEARINGS (AUTOMOTIVE)



UNIMAG WST (RAILWAYS)

FPI LINE LPM 2600 MAX (AEROSPACE)



UNIMAG AEROTESTER 1200 NG (AEROSPACE)

UNIMAG AEROTESTER 1200 NG (AEROSPACE) –DETAIL

Unique UNIMAG 2000 FLAT AC/HWDC for testing of large gear wheels

The UNIMAG 2000 FLAT is a new unique MPI system that been developed by ATG in 2021 for one of the biggest producers of large gears (up to 2000mm in diameter) to shorten the testing time about 2/3 compared to normal MPI benches. System provides automatic testing modes by AC/AC cross yoke and AC-HWDC split coil, offers fast demagnetization and is compliant with renown standards as ASTM E 1444, EN ISO 99341-2, BSS 7040, PR 5300, GOST 56512. System is ready for implementation of automatic defect recognition.



QUALIFICATION AND CERTIFICATION

Supervised collection of experience for aerospace NDT personnel available in ATG Prague

Candidates shall have sufficient practical experience to assure, that they are capable of performing the duties of given qualification Level. These activities joined with gaining of qualification shall be documented and available for the review. They are the only two parts of the qualification process, that may serve for gaining and strengthening of knowledge and skills.

Starting from 2020 ATG Group provides supervised collection of experience by NDT Level 3 personnel, that is focused to cover all key activities in sufficient amount, on equipment and parts from real production or operation, that are representative to the future performance activities the personnel will face in real operation. Process fully complies with the requirements of the customer's Written Practice and may use his internal documentation (specifications). This service may be performed also on customer's premises on his equipment.

Czech Senate President's diplomatic mission brought for ATG the first cooperation on Taiwanese market

ATG Ltd. is a proud participant of the Czech Senate President's diplomatic mission to Taiwan. Thanks to the dedicated support of Czech Senate President (Mr. Miloš Vystrčil) and his team ATG managed to start cooperation with the first Taiwanese companies starting from early 2022. The first projects included qualification acc. to EN 4179 / NAS 410 in accordance with requirements of EASA as defined by AMC.145.A.30.F.

TESTING AND INSPECTION

New RT-DR lab with 2 automated manipulators available for mass testing of metallic and composite parts

New RT-DR (Digital Radiography) lab was built in 2018 in ATG Prague and equipped by 2 independent manipulators: 5-axis manipulator for the X-ray source and 3-axis manipulator for the flat detector (sensitivity of 75 microns). Lab is able to test smaller parts from mass production or large rotational parts (up to 1.2m high and 1m in diameter) using automatic turntable.

Unique procedure for testing of pitting corrosion on water wall piping in power industry by digital radiography

ATG Ltd. executed successful trial run on its unique test procedure for detection, classification and evaluation of pitting corrosion on water wall piping in power industry using digital radiography. The procedure allows highly productive testing with capability to evaluate up to 100% water wall piping during standard shutdown, software also allows precise estimation of pitting depth by advanced image analysis. The procedure is relying on a special manipulator and software to ensure efficient results, that is currently developed and optimized as a part of an EU grant project.

COMPOSITES PRODUCTION (LA COMPOSITE)

Improving the environment by reducing carbon dioxide emissions

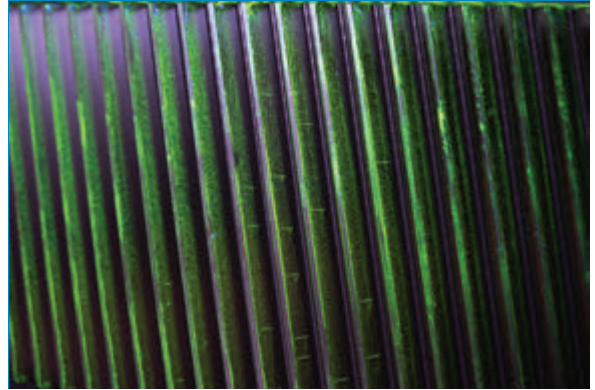
LA composite in 2019 started cooperation with an US partner on development, prototype production and certification by FAA for aerodynamics upgrade of existing aircraft. Purpose of this design is to reduce fuel consumption, emissions of carbon dioxide and noise during take-off and landing by special shape adjustments to the selected parts of the aircraft.

EASA Part 145 approval

LA composite received in early 2020 an approval of EASA Part 145 for composites (without aircraft type limitation) by Czech Civil Aviation Authority (ÚCL). LA Composite is now providing its capacities for MRO organizations for aircraft refurbishment along with its OEM production program.



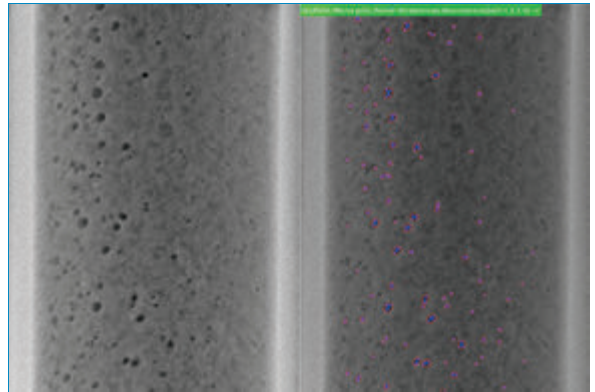
UNIMAG 2000 FLAT AC/HWDC (POWER)



UNIMAG 2000 FLAT AC/HWDC (POWER) – DETAIL



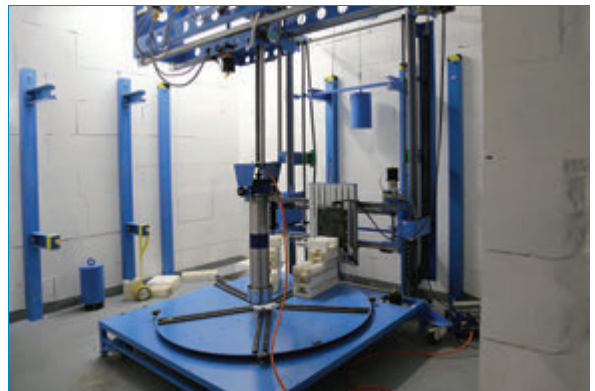
EXPERIMENTAL DR MANIPULATOR FOR TESTING OF PITTING CORROSION



RADIOGRAPH WITH PITTING CORROSION TAKEN DURING TRIAL RUN



GROUP PICTURE OF THE DIPLOMATIC MISSION OF THE CZECH SENATE PRESIDENT TO TAIWAN



RT-DR LAB FOR AUTOMATED TESTING OF METALLIC AND COMPOSITE PARTS

INTRODUCTION OF LA COMPOSITE LTD.

LA composite Ltd. (LAC), the member of ATG Group, is a recognized build-to-print manufacturer of composite parts for the aerospace industry. Started production in 1995 in Prague, Czech Republic, the company has been expanding its expertise in structural, interior and ducted composite parts for civil aircraft and helicopters.

LAC is a wholly owned subsidiary of ATG – Advanced Technology Group Ltd. with **70** employees and **4.5 million EUR** turnover annually.

LAC can offer full design, prototyping and technology development, production of high-precision and versatile moulds, serial manufacturing, post-processing and assembly, consultancy in engineering and training (in cooperation with ATG Prague) and repair services in composites industry. LAC is capable to produce geometrically complex components using mainly prepreg technology with autoclave or oven molding cures and additionally also vacuum infusion, RTM process or wet lamination (for moulds).

The company's quality approvals include EASA Part 21 G, AS 9100 and ISO 9001:2015. The company is also approved supplier for Airbus Helicopters, Korean Air, Leonardo Helicopters, Daher and Diehl Aviation.

MISSION

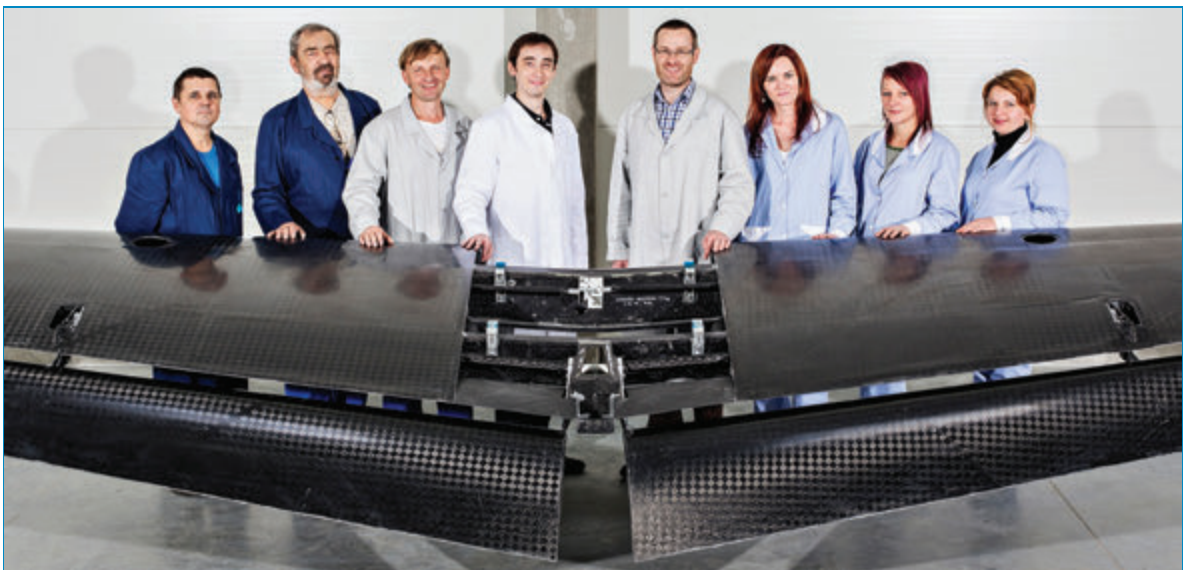
- Serve main **Prime customers** to deliver value-added products to final customers
- Develop core **technology** expertise within and outside the ATG Group

VISION

- Be a continually growing company (in terms of revenues, profits and technology progress)
- Manufacture comprehensive composite products for aerospace and transport industries
- Operate globally and act on global markets
- Be competitive on the quality of work and flexibility

STRATEGY

- Advance in technology through strategic partnerships
- Develop in-house technology and expertise
- Strengthen marketing and sales power within the ATG Group



PRODUCTION

The production facility is upgraded by continual investments; it has 3,500 m² of production area equipped with two autoclaves, ovens, freezers, CNC plotters and post-processing equipment. The production capabilities and skills are proven by more than ten years of successful ongoing partnership with Tier 2 suppliers all around the World.

Maintenance, repair, overhaul

Since 2019 LA composite is holder of the EASA Part 145 approval for composites without aircraft type limitations. It is therefore able to supply for its customers parts for aircraft refurbishment.

PRODUCT PORTFOLIO

- Aircraft fire protection lining (forward and aft cargo doors)
- Helicopter emergency flotation systems (forward and aft bays and covers)
- Helicopter skin sandwich panels
- Aircraft interiors (toilet floor pans)
- Air conditioning system (parts for heat exchangers)
- EASA CS 23 jet aircraft (composite fuselage and wings)
- Subway interior panels

MAIN CUSTOMERS

- Airbus Helicopters
- Korean Air Lines
- Leonardo Helicopters – Aerosekur
- Daher
- Diehl Aviation

AIRCRAFT EQUIPPED WITH LAC PARTS

- Airbus A320/330/350/380 families
- Leonardo Helicopters AW139/169/189
- Airbus H125



UL-39 project

Company LAC participates on the UL-39 project, where it ensures the technology development and prototype production of all composite parts including primary structure of the aircraft: fuselage, wings, tailplane, as well as parts of the landing gear, stator, rotor of the propulzor etc.

R&D AND TECHNOLOGY PROJECT

The goal is to provide a complete solution to customers incorporating LAC engineering services. LAC supports their customers by feasibility study, structural analysis AND technology development up to prototyping and serial production using 3D CAD and FEM software. With LAC partners, the company conducts experimental measurements and structural testing.

Green technology

LA composite cooperating with an US partner on development, prototype production and certification by FAA for aerodynamics upgrade of existing aircraft. Purpose of this design is to reduce fuel consumption, emissions of carbon dioxide and noise during take-off and landing by special shape adjustments to the selected parts of the aircraft.



INTRODUCTION OF ATG SLOVAKIA Ltd.

ATG Slovakia Ltd. (ATG SK), the member of ATG Group, was established in 2002 and since its establishment it is providing complete solution for NDT for the Slovakian market and support ATG Ltd. also on other markets.

ATG Slovakia Ltd. is a partial ownership subsidiary of ATG – Advanced Technology Group Ltd. with **30** employees and **1.5 million EUR** turnover annually. In 2022 ATG Slovakia celebrated its 20th anniversary.

MISSION

- Distribution and full support of all ATG Lt. products in Slovakian market including equipment and services
- Provide complete solution for NDT on Slovakian market
- Implementation of advanced NDT techniques to industrial practice from simple testing up to automated system solutions

VISSION

- Being a continually growing company (in terms of revenues, profits and technology progress)
- Be a leader in NDT personnel qualification on Slovakian market
- Be a leader in aerospace NDT testing on Slovakian market
- Operate in aerospace flexibly, fast and with global reach
- Compete on the quality of work, flexibility and honesty

STRATEGY

- Continuous innovation and implementation of advanced techniques
- High level of personnel practical experience through whole company structure
- Transfer of information and experience within ATG Group

TRAINING

Training center of ATG Slovakia provides complex services in the personnel qualification in both independent and employer-based qualification systems in all levels and all conventional NDT methods. Except the conventional NDT courses ATG Slovakia also provides specialized training for UTPA and TOFD. Qualification is in accordance with EN ISO 9712, EN 4179, SNT- TC-1 A, NAS410 and the customer requirements.

Training center of ATG Slovakia is accredited training center of the Ministry of Education, Science, Research and Sport of the Slovak Republic and approved training center of certification bodies Reaktortest, TUV Nord Czech and Certification body for NDT personnel on railways of the Slovak Republic. Training center of ATG Slovakia train over **300 people / year** in NDT.

Main customers of the Training center of ATG Slovakia

- Slovenské elektrárne a.s. (exclusive)
- US Steel Košice (exclusive)
- ŽOS Zvolen



SPECIAL PROCESS HOUSE

ATG Slovakia delivers Special Process House (complete NDT process delivery for mass testing) already for 15 years. As the only company in Slovakia on two different Special Process Houses in Slovakia. SPH equipment includes 2 FPI lines and RT-DR cabinet with a manipulator.

Automotive

NDT personnel of ATG Slovakia is testing various parts for prominent car and motorcycle manufactures, as for example:

- KTM
- Porsche
- Mercedes AMG
- Audi

Aerospace

ATG Slovakia is the only maintenance center approved by EASA Part 145 for process D1 in Slovakia. NDT services are provided mainly on the aircraft:

- Airbus A319 / A320 / A220
- Boeing 737 family
- Bombardier Q400
- Embraer E190 / E195
- Fokker F70 / F100
- Agusta A109K
- Sikorsky UH-60M "Black Hawk"
- and many others

Advanced techniques

ATG Slovakia provides its services in all conventional NDT methods and techniques. In recent years it also implemented many advanced techniques and applications to cover specific requirements of its customers as follows:

- UT – Phased Array / UT – TOFD / BondTesting
- HFEC + BHEC array
- IRT (Infrared Thermography)
- RT-DR (Digital Radiography)

SALES

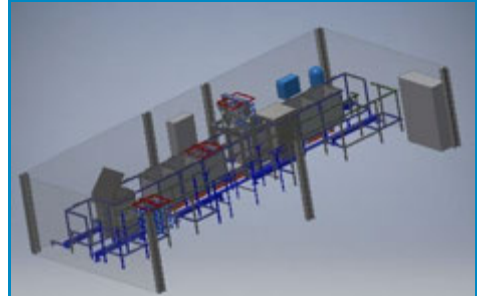
ATG Slovakia focuses on longtime cooperation with its customers. Key aspect is personal approach, discussion and consultancy to get better understanding of customers. That allows to provide more effective solutions that lead to their longtime satisfaction.

ATG Slovakia is able to deliver for its customers complete solution for NDT:

- Essential equipment for individual NDT methods – instruments, gauges, tools and consumables
- Products from ATG Ltd. – customized systems tailored to specific requirements of the customer (MPI benches, FPI lines, RTG sources FOKUS etc.)
- Top quality UT instruments of the company Sonatest from Great Britain
- Complex systems for DR (digital radiography) of the company Visiconsult from Germany
- Portable X-ray sources of the company Balteau NDT from Belgium

In addition to equipment delivery ATG Slovakia is able to provide NDT Level 3 consultancy / services.

For more information visit website www.atg.sk or company LinkedIn and Youtube channel.



FPI Line KLP-800

ATG Slovakia produced own FPI line specifically tailored for mass testing. FPI line located in Trenčín SPH works 24/7 testing mainly automotive parts. SPH workshop also includes yearly testing capacity of up to 1.2 million metallic pieces with weight up to 3 kg.

ATG GROUP PRODUCTION AND EQUIPMENT

ATG Group develops and produces wide range of equipment for NDT in all standard NDT methods and follow-up processes to NDT (e.g. etching, cleaning units, water treatment). The products may range from simple devices up to complex, innovative NDT systems, which use several NDT methods and fully automated testing mode for maximal elimination of human factor.

PRODUCTION CAPACITY AND PRODUCTION PROCESS

ATG Production Department disposes of enough professional personal capabilities for fast delivery of its products and during last 30 years already installed thousands of various NDT products, mostly for FPI, MPI and ET NDT methods. Every year ATG Prague produces hundreds of standard equipment and thanks to its flexible expert team as well as fully customized systems for NDT.

ATG Group takes advantages of synergy effect of all its activities which gives complete view on the provided solution. This allows reflecting of best practices already to the design of the equipment to be produced.



Every project is initiated by strong cooperation with the Customer and NDT specialists of ATG Group in order to evaluate and consider precisely relevant alternatives. Design of the products is tailored to suit Customer's specific needs, which are confirmed before the Construction and Manufacturing phases start. Every product, where it is possible, is pre-assembled in ATG facility in order to verify its functionality (pre-acceptance) and then installed as a turn-key product at Customer's site.

If requested, the products may be further optimized to minimize e.g. lead time, underutilization of workforce etc. As a part of optimization ATG Group also provides customized on-site training of the operators on given product acc. to requested NDT qualification system. In case of need, after-sales services for ATG products (both in-warranty and after-warranty) are available worldwide.

FOCUS ON QUALITY, RELIABILITY AND SAFETY

All systems, instruments and supporting equipment are produced in compliance with required safety and NDT standards. ATG Group focuses on high quality of manufacturing and therefore it implements (and is certified in) ISO 9001 Quality Management System and uses only high quality components for manufacturing and assembly (e.g. from Siemens, Sick, FESTO) on its devices.

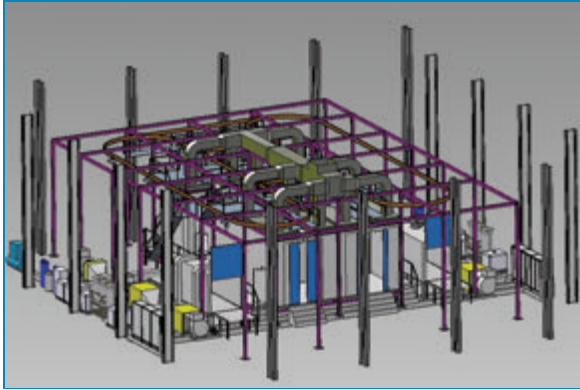
Due to the 30 years of production experience products of ATG Group are known for its very high reliability with very low defect rate and low level of necessary warranty servicing. This statement is proven by high level of repeated contracts from past Customers, who tend to return to ATG Group on a regular basis.

ATG GROUP FOR INNOVATION

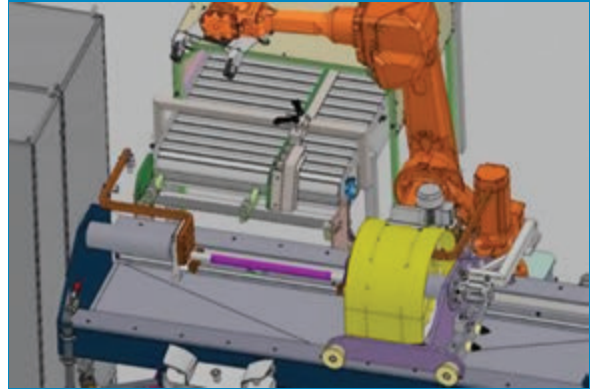
Products of ATG Group use the most modern technology in order to provide maximal testing efficiency for the Customer. This may include applications for **higher sensitivity, higher testing speed, reduction of human resources, reduction of unit testing cost** and others.

Special focus is on logistic and transport/handling systems of tested material with respect to the workplace ergonomics. Substantial effort is also given to new approaches to data processing (e.g. **C-scan**) or controlling and data collection systems for sophisticated inspection systems and development of the most advanced NDT technologies as **Quick Break for MT** and **automated defect recognition (ADR)** by utilizing deep learning.

PRODUCTION OF FPI (LPM 110K)



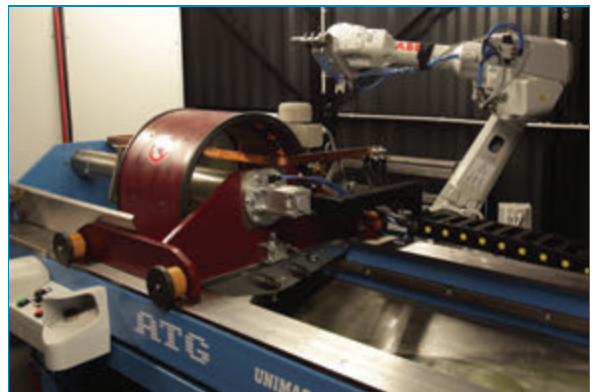
PRODUCTION OF MPI (ROBOMAG 1200)



DESIGN



MANUFACTURING



FINAL PRODUCT

MPI SYSTEMS AND EQUIPMENT

ATG Group designs and manufactures a complete range of MPI (Magnetic Particle Inspection) systems and equipment for all industrial sectors and in all requested magnetization combinations: AC, HWDC, FWDC. These systems are applicable in mass production in automotive industry (UNIMAG AC/AC series) as well as production and maintenance facilities (UNIMAG Basic, or MAGMAN series) for low/high volume testing in aerospace.

ATG is able to fulfill the most of the Customer's requirements by own design and internal mechanical and electronic workshop, especially for increase of testing productivity and safety:

- Customized clamping and manipulating systems, with ability to test parts ranging from pins, through rotor turbine blades up to crankshaft of ship diesel engines with length of 15 meters
- Design according to ASTM E1444 with Quick Break
- Operator-friendly control system
- Long-term stability without minimal servicing requirements with high load factor (30-50%)
- Internal calibration system with data acquisition system

The deliveries of these systems are joined with possibility to qualify NDT operators and provide on-the-job training in ATG Training Center where are disposable training MPI benches, or directly on delivered equipment at the customer's site.

MPI FOR AEROSPACE

Production (bearings, forgings, chasses)

- UNIMAG Aerotester NG single-generator series in compliance with ASTM E1444
- AC/HWDC/3xFWDC, Quick Break technology
- Able to cover NADCAP requirements

Maintenance (bolts, torque tube, brakes)

- UNIMAG Basic, MAGMAN AC/HWDC, MINIMAG
- Cost efficient solution with mechanical clamping
- Flat coils

MPI FOR AUTOMOTIVE

Mass testing (forgings, casting)

- UNIMAG AC/AC, AC/DC or special systems AUTOMAG (thousands parts per shift)
- AC/AC (two genetators) combined magnetization, automatic MPI process, automated evaluation, data archiving

Long products (shafts, arms)

- UNIMAG AC or AC/DC systems
- Automated MPI process

MPI FOR RAILWAYS

Production (wheels, axles, frames, bearings)

- UNIMAG AC/AC, UNIMAG Basic, MAGMAN AC/HWDC
- Special manipulation systems for automated systems

Maintenance (shafts, wheel sets)

- UNIMAG WST for testing of wheelsets
- UNIMAG AC, UNIMAG Basic, MAGMAN
- MAGMAN 4000 R for testing of wheels
- Split coil, yokes REM and RUM 230

MPI FOR ENERGY AND OTHERS

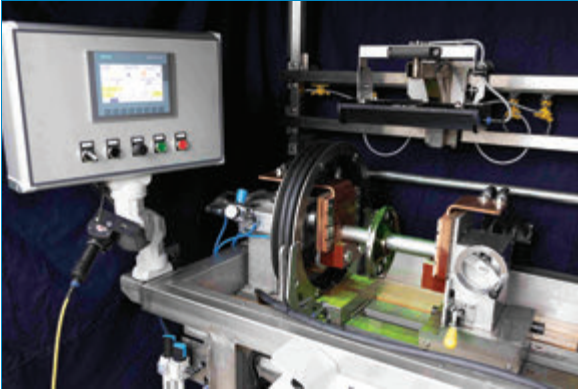
Forgings (shafts, crankshafts, rings)

- UNIMAG AC, AC/AC, consumption in MW
- Forgings up to 15 m long, 30 t heavy
- Special manipulation systems

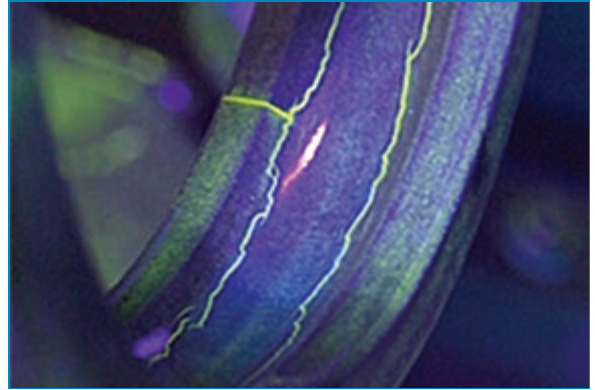
Castings (turbine's cases)

- MAGMAN AC/HWDC
- Multidirectional/vector magnetization
- Up to 3 x 20 000 A





UNIMAG 1200 AC/DC AEROTESTER NG QB



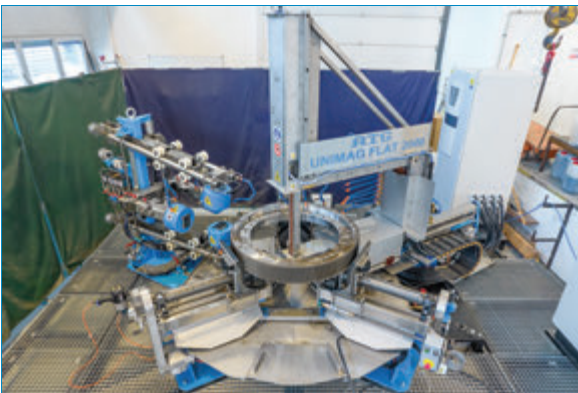
UNIMAG 1200 AC/DC AEROTESTER QB DEFECT DETAIL



UNIMAG 900 AC/AC (AUTOMOTIVE)



UNIMAG 2600 AC/AC/AC (RAILWAYS)



UNIMAG 2000 AC-HWDC FLAT (POWER)



UNIMAG 13000 AC/AC (POWER, MARITIME)

FPI SYSTEMS AND EQUIPMENT

ATG delivers own FPI (Fluorescent Penetrant Inspection) lines for high quality testing of surface defects, especially for aerospace industry (acc. to ASTM E1417) and high capacity, fully automated lines for automotive industry.

The most of delivered solutions are designed fully in accordance with Customer's requirements for inspection capacity, dimensions of tested parts and requested transport system – manual (LPM) with overhead hoist system or rollers, automated (LPC) with crane system or automated transport auto-operator system.

ATG's FPI lines can be delivered with immersion, spraying or electrostatic application of penetrant, with all possible types of developer application (immersion, storm cabinet, electrostatic generator), and all penetrant systems (especially water-washable and post-emulsifiable). If required, in anti-explosive version as well.

The customized solution allows consecutive upgrade to fulfill requirements for capacity increase or change/completion of penetrant/chemical system by additional technology. FPI lines are typical candidates for further testing optimisation.

All systems can be equipped by supporting FPI system technologies as:

- Water treatment of entering water and waste water from FPI system
- Surface treatment – etching before FPI process and accompanying water treatment (neutralization of waste water)
- Degreasing before FPI process
- Etching for macrostructure inspection after FPI
- Nital etching lines for Etch Inspection
- All solutions can be equipped with optimal transport system

The deliveries of these systems are joined with possibility to qualify NDT operators and provide on-the-job training in ATG Training Center where are disposable training FPI lines, or directly on delivered equipment at the customer's site.

FPI SYSTEMS FOR AEROSPACE

Production (blades, Al/Ti forgings, special alloys)

- Immersion or spraying type FPI lines
- Automated or manual transport system
- Etching and degreasing
- Able to cover NADCAP requirements

Maintenance (wheels, blades, beams)

- Immersion, spraying or combined type FPI lines
- Manual lines or cabins (KPM) from small footprint types to high capacity MRO powerful lines

FPI FOR AUTOMOTIVE

Mass production (Al castings, forgings)

- Fully automated immersion or spraying type FPI lines
- Conveyor type or batch transport system
- Capacity of up to 10 000 pieces per shift
- Possibility to place line in several floors to minimize the shopfloor area



FPI FOR LARGE PRODUCTS

Production (bars, tubes and castings)

- Semi-automated (LPC) or manual (LPM) FPI lines with special handling and transport system
- Special FPI Boxes
- Customized manipulators for heavy loading

OTHER APPLICATIONS

Laboratories, Education

- FPI cabins (KPM 1000 NG)
- Small education lines (LPM 50)
- FPI Box





LPM 1800 (AEROSPACE)



FPI LINKA LPM 110 K (AEROSPACE)



LPC D1 (AUTOMOTIVE)



LPM 2600 MAX (AEROSPACE)



LPM 2600 (POWER)



LPM 2600 (POWER) - DETAIL

ET AND UT SYSTEMS AND EQUIPMENT

ATG Group develops and manufactures a range of customized automated UT and ET systems (lines, manipulators) for rotational or longitudinal products (including specialized parts for railways, automotive and aerospace industry).

UT systems are equipped with SOCOMATE UT cards allowing wide flexibility in system parameters' modification. ET systems are based on Rohmann equipment. The mechanical, motion and control parts of lines or manipulators are designed, produced and programmed in ATG Ltd.

ATG Group also integrates UT systems with other NDT methods, e.g. MPI (for bearing rings inspection), or Eddy Current (bar/tube inspection). Thanks to these combined systems it is possible to reach high testing efficiency for the whole volume of products to be tested (combination of surface and volume method). ATG designs and produces own scanning manipulators (mechanics + motion control) as well as data acquisition and post processing software for all industrial applications as C-scan.

UT and ET systems are used in applications for aerospace, railways and wrought material. All these systems are equipped with mechanics and transport systems for products to be tested and own control system. The possibility of combination of more NDT methods can successfully solve various Customer's challenges.

The deliveries of these systems are joined with possibility to qualify NDT operators and provide on-the-job training in ATG Training Center where are disposable training UT and ET manipulators, or directly on delivered equipment at the customer's site.

ATG Group also delivers necessary calibration blocks (incl. composite and honeycomb) for adjustment of inspection devices.



UT FOR AEROSPACE

Production (forgings, shafts)

- UZM series, immersion UT systems for rotary parts
- 5- to 9-axis manipulators
- Data acquisition and post-processing software
- B-scan and C-scan technology
- Approved for GE, Rolls Royce, SNECMA production

Production (composites)

- Manipulators as well as robotic solutions
- B-scan and C-scan technology

UT FOR RAILWAYS

Production (wheels, axles, bearings, rail)

- UZM series, horizontal immersion UT systems
- Customized manipulation for high-speed inline applications, using of special probes
- Typically delivered together with MPI

ET FOR AEROSPACE

Production and maintenance

- Wheels and bearings testing
- Wrought material testing
- WHEEL TESTER
- BAR SCAN



ET/UT FOR WROUGHT MATERIAL PRODUCTION - LARGE PRODUCTS

Mass production (bars, tubes, billets, pipes)

- BAR SCAN, high-speed in-line inspection
- Data acquisition and post-processing software
- Phased Array systems
- Combined ET/UT/VT systems



UT – UZM 1000 (AEROSPACE) – TURBINE DISCS



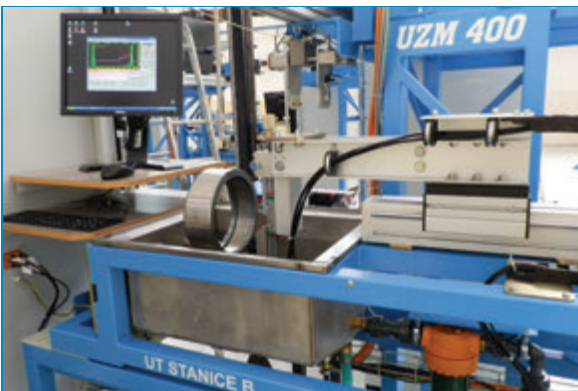
ET – AWM 100 (AEROSPACE) – WHEELS



UT – UZM 3000 CS (AEROSPACE) – COMPOSITES



ET/UT BARSCAN 25-130 SYSTEM (AUTOMOTIVE) – ALUMINUM BARS



UT – UZM 400 (RAILWAYS) – BEARINGS



ET – WHEELTESTER (AEROSPACE MAINTENANCE) – WHEELS

RT SYSTEMS AND EQUIPMENT

ATG Group develops and manufactures a range of standardized equipment for RT, suitable also for DR (digital radiography), including own X-ray source, flat detector or specialized manipulator for testing of circumferential welds on pipings. Equipment is suitable especially for assembly and erection works and small serial production for e.g. power or chemical industry.

X-ray sources ATG FOKUS

Portable X-ray sources **FOKUS XD** (direct 160 and 200 kV) and **FOKUS XP** (panoramatic 200 kV) has small dimensions and weight from just 5.4 kg – type XD160. They are therefore one of the smallest X-ray sources with constant power in its class. Sources are designed to work with 230V from power grid, 24V battery or 12/24V converter. The whole set is delivered including a cooler (ventilator) that can be placed directly on the source main body.

Control may be solved by two types of the controlling panel – remote control (**RC**) or cable release (**Cable**).

The original accessories (optional) include wide range of handy tools, e.g. tripods, magnetic clamping brackets, colimators, external batteries, voltage converters or transport suitcases. Often requested accessories are external accumulators in portable shockproof suitcase, including charging with microprocessor. The battery life before recharge (if used with FOKUS XD 160 kV on full power) is approx. 30 – 50 min.

Detectors ATG SCANRAY

Flat detectors **ScanRay** are produced in cooperation with a Worldwide producer and they are targeted for use in NDT, with possible load up to 450 kV (depending on chosen type). Important advantage of these flat pannels is quick access to final radiograph - compared to the film radiography the time is approximately one third.



Software ScanRay 64 allows further processing of the radiographs and the UI may be delivered with English or other language localization. Data transfer from the detector to the cablecable is performed wirelessly or by cable (in the station package).

Detector is also by default equipped by removable grip and two accumulators including charging dock, WiFi router with cables and charger, shockproof tablet and laptop and pre-installed ScanRay 64 software including other accessories.

X-ray cabinets VISICONSULT

ATG Ltd. is an authorized distributor and servicing center of company **Visiconsult**, German producer of precise X-ray cabinets. Cabinets are delivered as customized solutions, fully shielded by lead, including suitable X-ray source, detector and manipulator. Each Visiconsult cabinet is prepared for later implementation of CT technology (3D imaging - tomography).

A whole family of cabinets is available, from smaller XRH 111 up to big XRH 222 XL. ATG Ltd. also provides open system XRH Gantry for testing of heavy, large parts or parts with complicated shapes. Selected systems are being used in processes accredited by NADCAP. Installations include applications for aerospace and nuclear industry.



SYSTEMS WITH AUTOMATIC DEFECT RECOGNITION (ADR)

R&D team of ATG Group develops own ADR (Automatic Defect Recognition) systems for automatic illumination, capture, and indication (defect) detection and classification for methods VT, MT and PT. These ADR systems are delivered on customer's request also with manipulation including bin picking.

iVT systems allow detection of what a human operator may see and recognize, which usually includes wrong signatures of parts, scratches, pressure marks, corrosion, porosity, non-wrought parts or burnouts, cracks, wrong dimensions, wrong assembly, presence of foreign objects etc..

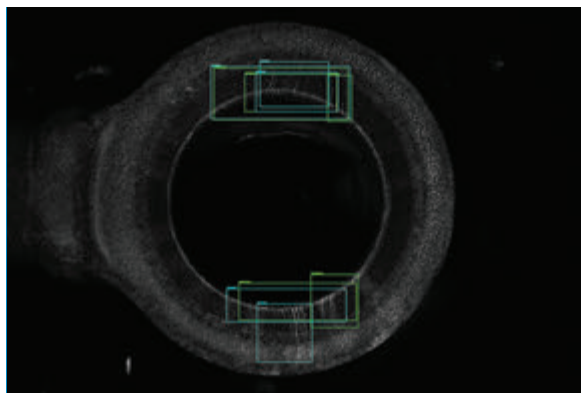
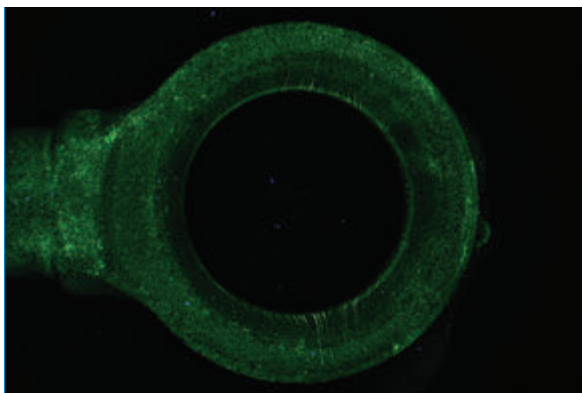
iMT and iPT systems allow assessment of presence, type, position and size of indications, which is a challenge itself due to complexity of shape, background level and other. ATG Group resolved this problem thanks to long-time experience in NDT of its staff that was reflected during implementation with modern and unique hardware and software (deep learning).

Registration level of main indication or defect dimension is typically reaching 0.1mm, but is further conditioned by the surface roughness. Evaluation speed is always same or better than by human operators (especially on larger areas the ADR systems provide significant advantage). Systems are therefore able to replace human operators for testing of parts' quality and may reach more productive results than human operators.

In all cases the cooperation with customer is a key, especially important is provision of sufficient amount of representative samples that allows precise indication or defect recognition via deep learning process.

Complexity increases with complexity of parts and complexity of its surface and roughness. For that reason the suitable candidates for automation with ADR are mass produced parts with higher surface quality, where the expenses associated with deep learning process and cost of equipment are lower and thus the return on investment may be reached sooner.

Return on investment is usually in range from 1 to 3 years depending on the testing actions to be performed on the given part, labor cost in the area of installation and also current productivity of existing process.



NDT INSTRUMENTATION AND EQUIPMENT SUPPLIERS

In order to offer to the Customer a complete portfolio of products on high technological level, ATG Group **cooperates with the following reputable companies**, which are being the experts in their respective field.

ET (EDDY CURRENT TESTING) – ROHMANN GMBH



Rohmann GmbH is a German company located in Frankenthal that has been more than 30 years on the market with the ELOTEST equipment for crack detection, material sorting and hardness testing. Rohmann is also well-known for their special customized high-tech probes for various industrial fields. ATG Group supplies Customers with their handy equipment for aerospace as well as different automatic systems for automotive (pistons, bearings, shafts) and semi-product industry (tubes, bars).

- TOP products: ELOTEST, DRAISINE WPG D340
- Exclusive territory: Czech and Slovak Republic
- Non-exclusive: Bosna and Hercegovina, Iraq, Croatia, Russia (only aerospace), Slovenia and Serbia
- www.rohmann.de

MPI AND FPI CHEMICALS – CHEMETALL GMBH



Chemetall GmbH from Frankfurt u. Mohan is a worldwide no. 1 in MPI and FPI chemicals. Thanks to this longtime cooperation ATG can offer to the Customer wide range of professional products for NDT in automotive and aerospace industries with all needed approvals. In addition, the company can also supply other products form sealing, cleaning and conservation for all industry.

- TOP products: ARDROX, CHECKMORE, LUMOR, BRITEMORE
- Exclusive territory: Czech and Slovak Republic
- www.chemetall.com

RT (RADIOGRAPHY) – BALTEAU NDT SA



Belgium company BALTEAU NDT is the only X-Ray manufacturer able to propose wide range of solutions applicable to all kind of industrial sectors from Biomedical to Oil & Gas. Balteau NDT also (as the only one company) offers patented remote control unit called HAND-X.

- TOP products: CERAM, LLX, HAND-X
- Exclusive territory: Czech and Slovak Republic
- Non-exclusive territory: Serbia
- www.balteau.com

DR (DIGITAL RADIOGRAPHY) – FLAT DETECTORS – NOVO-DR Ltd.



ATG is an official distributor of Izraeli company NOVO DR, which is a top performer in the area of digital radiography for NDT. This company is specialized for portable DR equipment – flat detectors – for NDT and security. The main competitive advantages include simplicity to use, reliability, and user friendly hardware and software. It is a Worldwide reputable producer of RT-DR technology.

- TOP products: DISCOVERY II, ULTIMATE, software NOVO Touch Pro
- Exclusive territory: Czech Republic
- <https://www.novo-dr.com/>



DR (DIGITAL RADIOGRAPHY) – VISICONSLT GMBH

ATG is an official distributor and servicing center of German company VISICONSLT, producer of X-ray cabinets for NDT. The company provides advanced complete solution for X-ray cabinets of various sizes, including sophisticated software X-Plus and CNC manipulators. Together with ATG specialists VisiConsult delivers customized solution for various applications in NDT, including systems satisfying requirements of NADCAP checklists for aerospace industry.

- TOP product: X-plus, YÜPÁFFÉYÜPÁGG
- Exclusive territory: Czech and Slovak Republic
- Non-exclusive territory: on approval by VC
- www.visiconsult.com



UT (ULTRASONIC TESTING) – SONATEST LTD.

Sonatest Ltd. is top-end producer of equipment for ultrasonic testing. Throughout the twenty-years-long cooperation with this British company from Milton Keynes ATG delivered to its Customers many UT devices ranging from thickness gauges and UT probes up to UT instrumentation. In last years we are proud to bring one of the best Phased Array systems: VEO and PRISMA on market.

- TOP products: SITESCAN, MASTERSCAN, WHEEL PROBE, VEO+ and PRISMA
- Exclusive territory: Czech and Slovak Republic
- Non-exclusive territory: Serbia
- www.sonatest.com

UT (ULTRASONIC TESTING) – PHOENIX ISL LTD.



The company PHOENIX ISL is a specialist in design and manufacture of ultrasonic non-destructive testing solutions serving sectors such as power, aerospace, process industries and railways. Phoenix ISL offers a dynamic range of standard NDT products, from manual and automated scanners, probes and instrumentation to sophisticated nuclear plants' inspection, or turbine and generator systems inspection, all using the latest techniques, including TOFD and Phased Array technology.

- TOP Products: WrapIt, MagMan, Bracelet
- Exclusive territory: Czech and Slovak Republic
- Non-exclusive territory: Serbia
- www.phoenixisl.com

Except the above-mentioned companies, ATG Group also supplies the Customers with products of ATC, MR Chemie and FOMA. ATG also implements hardware and software from Rittal, Rockwell, Siemens, Socomate and others. Further information about their use may be found on ATG websites www.atg.cz.

QUALIFICATION PROCESS

ATG Group implements requirements of the Customer to its product delivery in order to help him to be competitive on the market. Personnel qualification of Customer's employees is an important part of this task that requires specific assessment.

The Employer (supplier) takes full responsibility for his products and this responsibility is further transferred to employees by their contract in the company. Each employee therefore takes responsibility for his/her work. Due to that he or she must be well qualified for work, which means to fulfil minimal requirements for education and vision acuity, has experience in the field and be trained and examined by someone that copes well with the given field.

The **qualification process** as a whole is composed of 3 parts:

- Qualification training
- Qualification examination
- Certification

Applicants need to pass every step in order to successfully complete the process. Each step is paid and prices may vary dramatically depending on the length and by organizations providing the qualification.

Therefore it's important to know the adequate range of requested qualification for own employees: **process, qualification system, method, qualification level** (and technique), **sector** (and **product code**). Proper selection determines the effectiveness with which the employee will be able to work as well as operational expenses to be spent.

This six-combination gives exact quantification of provided qualification of the requirements put on the trainee, both legal and personal. ATG Group uses it to help the Customer to choose an appropriate qualification for their employees based on their requirements and needs.

SELECTION OF QUALIFICATION

Processes (e.g. NDT, welding) in terms of qualification may be seen as the industrial or production activities that the company is implementing. Regular employee is usually working only in one process (or even only its part).

Qualification for each *process* may be done according to various **qualification systems**. Each system reflects different verification mechanism (independent and employer certification) including strictly observed **industrial sectors** (aerospace, pressure vessels) due to high danger/responsibility involved (e.g. EN 4179/NAS410).

Both Process and System are usually predefined by the company's business environment that is given for the company and therefore usually cannot be selected freely. The next four operational attributes provide more flexibility.

Method is a set of physical principles, technology and knowledge to be used to process particular activity within the *Special Process* of the company's interest. In terms of the whole combination, this is the *key decision point* for the responsible manager as it decides what the employee is going to do on shopfloor.

Level determines the extent of knowledge operator needs to know and basic range of responsibilities he/she may have delegated once working in the field. In most of the *systems*, 3 basic qualification levels are accepted.

- *Level I* – operator is performing without evaluation under an operator Level II, or III respectively, without evaluation
- *Level II* – operator is responsible for evaluation and is qualified to write instructions for Level I
- *Level III* – operator is responsible for the whole NDT process (is a manager) for given method

Industrial sector defines the area of the interest. In industrial inspections, this usually means the types of products to be tested (e.g. welds, castings) or industrial field (e.g. aerospace, railways). Some systems does not recognize sectors.

Product code defines a specific documentation that prescribes the special method of production that has been used (e.g. ASME Code, EN 13445, AWS D1.1., EN 1090). This further narrows down *industrial sector*, or it defines specific approach given by e.g. country of origin.



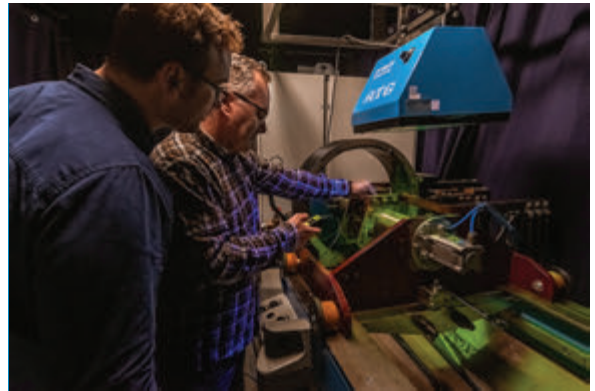
RADIOGRAPHIC TESTING (ABU DHABI, UAE)



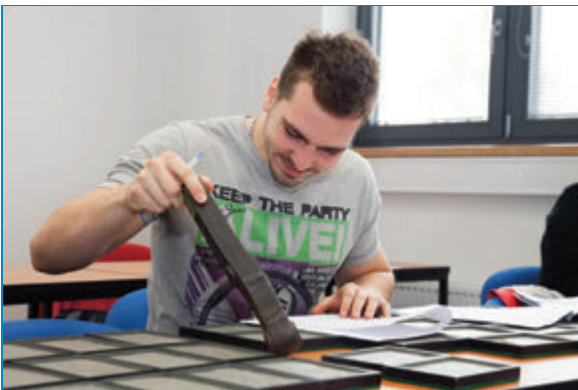
EDDY CURRENT TESTING – TESTING OF WHEELS (KOREAN AIR, SEOUL)



ULTRASONIC TESTING – PHASED ARRAY (ATG PRAGUE)



MAGNETIC PARTICLE TESTING (ATG PRAGUE)



VISUAL TESTING OF CASTINGS (ATG PRAGUE)



PENETRANT TESTING (PUNE, INDIA)

PERSONNEL QUALIFICATION TRAINING

Training in ATG Group is performed in well-equipped classrooms using modern technologies of presentation, own handbooks and practical exercises with **well-equipped laboratories, company-prepared handbooks, real-life samples** provided from company's partners from operation and **experienced lecturers** with individualistic approach to the trainees to maximize the added value of the training.

GENERAL PART

Professional training should provide **strong background in theory** that enhances the practical abilities by real understanding of the problem. ATG Group provides its **own handbooks**, which reflect 27 years of experience on the market. All handbooks use the most renowned sources (as ASM and ASNT handbooks) and are always practically oriented, providing both physical background and manual for in-practice operation. Handbooks are also reflecting the content of general part of the tests in partners' Examination Centers.

SPECIFIC PART

Each NDT operator must be able to work correctly with related standards and internal documentation. In each method experienced lecturers of ATG Group help **to facilitate the understanding and importance of NDT standards and specifications to trainees** (or other for different qualification systems as Welding Inspections, Plant and Third Party Inspections) by teaching them how to use the standards and internal specifications properly and highlighting the key aspects of most widely used standards for each method and system.

For Employer qualification system ATG Group **uses the Employer's internal company documentation and specifications** directly to bring the training **as close to the operation in practice as possible, following precisely the requirements of the Customer's Written Practice**.

PRACTICAL PART

In total, there is **over 1 200 training samples available** for the practical part of the training to ensure trainees will have enough opportunities to handle the method well for the practical part of the test and get sufficient basic experience for right further development. Samples are selected to provide various types of defects that the operator may encounter in operation in various industrial sectors. Fully equipped laboratory for each system and method is available for practical part of the training, including modern NDT equipment and NDT systems (FPI lines, MPI benches, UT manipulators etc.) from ATG Special Process House (i.e. representative to production program) and all necessary probes, gauges, test blocks etc.

Training can be provided in ATG Group's facilities, or it can be realized in the Employer's plant as well. Training can be provided in Czech, Slovak, English, Russian, German and Arabic language.

The same philosophy as for the products of ISO 9712, ISO 20 807, SNT-TC-1A, EN 4179 / NAS 410 is also adopted for specialized products as for UIC 960 or other processes as Plant Inspection, Welding Inspection and Third Party Inspection.





EXPERIENCED LECTURERS WITH PERSONAL APPROACH PROVIDE TOP-END QUALITY OF TRAINING



TRAININGS ALWAYS FOCUSED ON GETTING PRACTICAL EXPERIENCE



EXTENSIVE IMPLEMENTED SYSTEM OF TRAINING TESTS FOR MONITORING OF ACQUIRED KNOWLEDGE

QUALIFICATION EXAMINATION

Qualification examination shall verify the trainee's ability to perform defined activity according to the requirements, with respect to related standards, specifications and qualification system as ISO 9712, ISO 20 807, SNT-TC-1A, EN 4179 / NAS 410 etc.

ATG Group provides **professional approach, focusing strictly on testing of capabilities** of operation in practice for all trainees to be tested. ATG Group does not use quibble questions. Tests are carefully prepared for each qualification level to check trainee's knowledge and skills only in the given field.

In order to balance all test sets, the success on each answer is **periodically monitored** and questions are altered or replaced when proven to be too easy or too difficult (resp. misleading) by internal method task groups.

Practical part of the test is always held on carefully selected test samples, which are separated from training samples and which fulfill the criteria of defined qualification system as ISO 9712, ISO 20 807, SNT-TC-1A, EN 4179 / NAS 410 etc. Test samples vary (e.g. for ISO 9712 multisector) so the trainee is tested in broader range of method's applications. All test equipment is provided on the place, but personal test devices are accepted after safety check.

Examinations in employer-based qualification systems are acc. to the customer's Written Practice (i.e. for example they reflect implemented techniques) and in the specific and practical part they are in agreement with internal documentation of the customer and his production program. **Examinations acc. to EN 4179 / NAS 410 are performed by approved examiners under control of Czech NANDTB.**

IMPARTIALITY

There are various means of maximizing impartiality during the test implemented on the examination process. Examiners of ATG Group are trained to provide support when needed without impartiality breach. Content of the tests is always reflecting the content of the trainings and any topic that may occur in a test question is always explained during the training in ATG Group Training Centers and is listed in related ATG Handbook.

CERTIFICATION POSSIBILITIES

ATG Group cooperates in independent qualification systems with accredited certification bodies that accept the results of the ATG Examination Center (**APC, Reaktortest, TÜV Nord Czech and KiWA Inspecta** for ISO 9712, ISO 20 807, **AWS and IIW IAB / CWS ANB** - for Welding Inspectors). In addition, ATG Group runs its own, non-accredited certification body ATG CERT as an alternative to those mentioned or for special qualifications out of standard qualification systems.



CERTIFICATION PROCESS

Operators prove their eligibility by personal certificates. Personal certificate is the result of the **certification process**, which verifies compliance with all certification requirements, which are:

- Basic education (i.e. operator can read and count)
- Practical experience in the field (method, technique)
- Documented training with required number of hours
- Successfully passed qualification exam
- Demonstration of visual competence (i.e. visual acuity)

Certification body shall verify compliance with certification requirements and based on the compliance prepare a written statement. This written statement is referred to as the *certificate*. (The certificate is not an authorization to work.)

Certification requirements are stated in the certification regulation. This document defines the qualification levels, their requirements, basic responsibilities and conditions for issuing certificates and it is given by each certification body.



TYPES OF CERTIFICATION

In **independent certification** independent certification body has no direct relation to person to be certified as well as his employer. This certification is governed by the ISO 17024 standard and in NDT uses mainly ISO 9712 and ISO 20 807.

In **employer certification** the person responsible for certification is the employer or a person authorized by the employer. This certification is governed by the employer's qualification and certification regulation (so-called Written Practice), which is created on the basis employer-based qualification standards as ASNT Recommended Practice No. SNT-TC-1A (it is not the same as ASNT CP 189, ASNT Level 3 certification or ASNT ACCP) or EN 4179 / NAS 410.

For specific industries such as aerospace, steel products and pipes production, and railways other special standards are used, e.g. EN 4179 / NAS 410, ISO 11484, EN 10256, or UIC 960, ASME ANDE-1. They usually follow the *employer certification* (except UIC 960 and ASME ANDE-1).

NDT personnel qualified in ATG Training Center can be certified by independent certification bodies APC, ATG CERT, Reaktortest, TÜV Nord Czech and KIWA Inspecta Latvia. ATG Training Center, however, provides trainings also for employer certification system acc. to SNT-TC-1A and EN 4179 / NAS 410. In such case the certification is performed acc. to the standard and customer's Written Practice. Training center also provides qualification acc. to UIC 960 for NDT in railways and acc. to AWS and CWS ANB for welding inspection.

ISSUING, VALIDITY AND TRANSITION BETWEEN CERTIFICATION BODIES

The certificate determines, who is the person to be certified, in which process, sector, method and level (sector) and in which period is valid. After expiration operators must apply for recertification and reassess the certification requirements.

In some cases (in the case of independent personnel qualification and certification) the candidate or the employer decides to change the certification body in order to meet the requirements of the Customer. In such case the following applies:

Training, which is well documented in terms of duration, content and participation, may be applied to any certification body for certification act. It means after passing the training in ATG Group the doors keep open for various certification bodies.

Qualification exams are recognized only for approved Examination Centers. In case of passing the exam in ATG Group the applicant may apply for certification at APC, ATG CERT, Reaktortest, TÜV Nord Czech and KIWA Inspecta Latvia.

Certification body can be changed by the person to be certified according to his or her own decision. There are instructions to follow. ATG CERT allows transition from other trusted systems through recertification exam.

ACCREDITATION OF CERTIFICATION BODIES

Often repeated and justified question in the independent qualification system is **who has the right to question the correctness and usability of a certificate?** Or, in other words: Is there a third party, who determines the correctness of the certificate?

Many organizations claim the right to judge this and the uninformed reader may get confused based on the strong words of disapproval of one party or the other. On this page this issue is explained in order to make the end to the misleading and incorrect understanding of this problem.

RECOGNITION OF CERTIFICATION BODIES

Personal certificate may be recognized or not recognized only by the following parties (i.e. they may question certificate's usability):

- **Employer** of the person to be certified
- **State** (in the case of qualification for PED [Pressure Equipment Directive] 2014/68/EU – former 97/23/EC)
- **Customer** and the customer's inspector on his behalf

There are no other legitimate reasons of certificate's recognition for the NDT performance purposes. Certification bodies may claim that they do not recognize the certificates of other bodies, but this decision is valid only for them and does not represent any obligation (and cannot be enforced) for the employer, state or the customer.

ACCREDITATION AND ITS INFLUENCE ON RECOGNITION

Organizations that issue credentials or certify third parties against official standards may be themselves formally accredited by accreditation bodies, hence they are sometimes known as "accredited certification bodies". The accreditation process should **maximize the chance** that their certification practices are acceptable, typically meaning that they are competent to test and certify third parties, behave ethically and employ suitable quality assurance.

Nevertheless, **there is no requirement for certified bodies to be accredited** and it does not apply that non-accredited body is automatically worse in terms of quality. There is no request to pass the accreditation by law and thus the **accreditation works only as a benchmark of minimal quality, not as an assurance of the top quality.**

It is again the privilege of only the employer, state or customer to determine whether the non-accredited or accredited certification body is trustworthy for them or not. If the certification body has high reputation and is able to demonstrate correct approach, there is no reason not to use such an organization, regardless the accreditation status. That is, because the accreditation does not provide any real benefit for the customer, except independent administrative verification of certification process setup in given certification body.

ATG GROUP AND ACCREDITATION OF CERTIFICATION PROCESS

ATG Group believes the real quality services can be provided without accreditation. It bases its certification activities on the reputation where the credibility of the system is guaranteed by the credibility of the whole ATG Group's system and behavior. As a result, daughter company **ATG CERT provides only non-accredited certificates**, as an alternative for the Customer to accredited certificates of partner certification bodies.

In order to satisfy the demand of the Customer, ATG Group developed a training and examination system, which is fully accepted by accredited certification bodies as well (APC, Reaktortest, TÜV NORD Czech and KIWA Inspecta Latvia).

Applicant successfully passing the qualification process (which is the same for all applicants in the same given combination of method / level / sector) may choose, whether he/she would like to apply for certificate by a non-accredited certification body ATG CERT, or pay premium for a certificate of partner, accredited certification bodies.

ATG CERT

ATG CERT is an independent, non-accredited certification body with own Examination Center. ATG CERT complies with the criteria of ISO/IEC 17024 and offers a reliable and cost-effective personnel qualification and certification for:

- NDT personnel acc. to ISO 9712 in all standard NDT methods and all levels
- NDT personnel acc. to ISO 20807 (UTT – Ultrasonic thickness testing, UT-SWT – Ultrasonic testing of spot welds)
- NDT personnel out of scope of EN ISO 9712 (e.g. VT2w - Visual testing of welds, VT2c - Visual testing of castings)
- Welding Inspections personnel
- Plant Inspections personnel
- Third Party Inspections personnel

Certification processes of ATG CERT are described by its Procedures. To ensure the widest possible recognition and acceptance, the ATG CERT Procedures are based on and fulfill the requirements of the International and European standards related to the qualification used in industry.

ATG CERT also offers an option whereby certification of NDT personnel can be carried out by an accredited certification body as: APC, Reaktortest, TÜV Nord Czech and KIWA Inspecta Latvia. It is possible to use the results of the certification process of approved certification bodies for ATG CERT certification as well.

The goal of ATG CERT is to make its certificate holders respected throughout the industry worldwide.

IMPARTIALITY

ATG CERT has been arranged in conformance with ISO/IEC 17024. ATG CERT is a separate unit within ATG Group structure and is independent of any single predominant interest. Board of ATG CERT is composed of leading experts with highest level of credibility in the processes they cover.

HOW TO OBTAIN ATG CERT CERTIFICATION

The candidates for ATG CERT certification must have a successfully completed training complying with ATG CERT syllabuses, exam by EC of ATG CERT and fulfilled the requirements for experience and vision acuity.

Certification by ATG CERT is open for holders of current valid certificates issued by other certification bodies by its **controlled recertification process** defined by internal procedure. ATG CERT will grant exemption for specified part of exam for holders of valid certificates issued by a certification body approved by ATG CERT.

EXAMINATION CENTER – EC ATG CERT

Examination Center of ATG CERT offers examinations of NDT personnel (especially acc. to ISO 9712 and ISO 20807) and inspection personnel in independent certification systems.

The Examination Center is approved by following Certification bodies: APC, ATG CERT, Reaktortest, TÜV NORD Czech and KIWA Inspecta Latvia to conduct the qualification examination for NDT and inspection personnel and in addition AWS and IIW IAB / CWS ANB for Welding Inspection.

ATG CERT is periodically independently audited to ensure the highest standard of professional service and confidentiality.

ATG CERT has high degree of flexibility and is able to conduct examinations upon demand at any location in Europe, Asia and North Africa in Czech, English and Russian languages.



STANDARD COURSES PROVIDED IN ATG GROUP

Process	System	Method	Technique (level*)	Sector	Code
NDT	ISO 9712	BASIC **		MS	
NDT	ISO 9712	ET – Eddy current Testing		MS	
NDT	ISO 9712	ET – Eddy current Testing		t	
NDT	ISO 9712	FT – Flux Testing		t	
NDT	ISO 9712	LT – Leak Testing	B, C	MS	
NDT	ISO 9712	LT – Leak Testing		HS	
NDT	ISO 9712	MT – Magnetic particle Testing		MS	
NDT	ISO 9712	MT – Magnetic particle Testing		w	
NDT	ISO 9712	MT – Magnetic particle Testing		c	
NDT	ISO 9712	PT – Penetrant Testing		MS	
NDT	ISO 9712	PT – Penetrant Testing		w	
NDT	ISO 9712	PT – Penetrant Testing		c	
NDT	ISO 9712	RT – Radiographic Testing	CR, DR	MS	
NDT	ISO 9712	RT – Radiographic Testing	CR, DR	w	
NDT	ISO 9712	RT – Radiographic Testing	CR, DR	c	
NDT	ISO 9712	RT – Radiographic Testing	CR, DR	we	
NDT	ISO 9712	RT – Radiographic Testing	CR, DR	ce	
NDT	ISO 9712	RT – Radiographic Testing	CR, DR	PV	
NDT	ISO 9712	UT – Ultrasonic Testing	PA	MS	
NDT	ISO 9712	UT – Ultrasonic Testing	PA, TOFD	w	
NDT	ISO 9712	UT – Ultrasonic Testing	PA	c	
NDT	ISO 9712	UT – Ultrasonic Testing	PA	t	
NDT	ISO 9712	VT – Visual Testing		MS	
NDT	ISO 9712	VT – Visual Testing	d	w	
NDT	ISO 9712	VT – Visual Testing	d	c	
NDT	ISO 9712	VT – Visual Testing	d	l	
NDT	ISO 9712	VT – Visual Testing		PV	
NDT	ISO 20807	ET – Eddy current Testing	ETT	-	
NDT	ISO 20807	UT – Ultrasonic Testing	UTT, SWT	-	
NDT	SNT-TC-1A	AUDITOR		-	
NDT	SNT-TC-1A	BASIC **		-	ASME, API
NDT	SNT-TC-1A	ET – Eddy current Testing		-	
NDT	SNT-TC-1A	FT – Flux Testing		-	
NDT	SNT-TC-1A	LT – Leak Testing		-	ASME
NDT	SNT-TC-1A	MT – Magnetic particle Testing		-	ASME, API
NDT	SNT-TC-1A	PT – Penetrant Testing		-	ASME, BPVc
NDT	SNT-TC-1A	RT – Radiographic Testing	CR, DR	-	ASME, API
NDT	SNT-TC-1A	UT – Ultrasonic Testing	PA, TOFD, ATM, DTM	-	ASME
NDT	SNT-TC-1A	VT – Visual Testing		-	ASME
NDT	SNT-TC-1A	IRT – Infrared Thermographic Testing		-	
NDT	EN 4179/NAS 410	AUDITOR		-	
NDT	EN 4179/NAS 410	ET – Eddy current Testing	ECA	Part 21	
NDT	EN 4179/NAS 410	ET – Eddy current Testing	ECA	Part 145	
NDT	EN 4179/NAS 410	FT – Flux Testing		Part 21	
NDT	EN 4179/NAS 410	FT – Flux Testing		Part 145	
NDT	EN 4179/NAS 410	LT – Leak Testing		Part 21	
NDT	EN 4179/NAS 410	LT – Leak Testing		Part 145	
NDT	EN 4179/NAS 410	MT – Magnetic particle Testing		Part 21	
NDT	EN 4179/NAS 410	MT – Magnetic particle Testing		Part 145	
NDT	EN 4179/NAS 410	PT – Penetrant Testing		Part 21	
NDT	EN 4179/NAS 410	PT – Penetrant Testing		Part 145	

Process	System	Method	Technique (level*)	Sector	Code
NDT	EN 4179/NAS 410	RT – Radiographic Testing	CR/DR	Part 21	
NDT	EN 4179/NAS 410	RT – Radiographic Testing	CR/DR	Part 145	
NDT	EN 4179/NAS 410	UT – Ultrasonic Testing	PA, IMT, ATM, DTM	Part 21	
NDT	EN 4179/NAS 410	UT – Ultrasonic Testing	PA, IMT, ATM, DTM	Part 145	
NDT	EN 4179/NAS 410	VT – Visual Testing		Part 21	
NDT	EN 4179/NAS 410	VT – Visual Testing		Part 145	
NDT	EN 4179/NAS 410	IRT – Infrared Thermographic Testing		Part 21	
NDT	EN 4179/NAS 410	IRT – Infrared Thermographic Testing		Part 145	
NDT	EN 4179/NAS 410	TCS – Testing of Composite Structures		Part 21	
NDT	EN 4179/NAS 410	TCS – Testing of Composite Structures		Part 145	
NDT	EN 4179/NAS 410	EI – Etch Inspection		Part 21	
NDT	ATG G 19-32	Introduction to NDT		MS, w, PV	PED,ASME,AWS
NDT	ATG G 19-32	VT – Visual Testing		w	
NDT	ATG G 19-32	VT – Visual Testing		c	
NDT	ATG G 19-39	Internal auditors of NDT		AS, MS	
NDT	ATG G 19-39	Auditors of NDT process		AS, MS	
NDT	ISO 11484	ET – Eddy current Testing		wp	
NDT	ISO 11484	MT – Magnetic particle Testing		wp	
NDT	ISO 11484	PT – Penetrant Testing		wp	
NDT	ISO 11484	RT – Radiographic Testing		wp	
NDT	ISO 11484	UT – Ultrasonic Testing		wp	
NDT	ISO 11484	VT – Visual Testing		wp	
PI	ATG G 19-34	COR - Corrosion Inspection		-	
PI	ATG G 19-34	MI – Mechanical Inspection		-	
PI	ATG G 19-34	DT – Destructive Testing		-	
PI	ATG G 19-34	MEI – Machinery Equipment Inspection		PE	API 510
PI	ATG G 19-34	MEI – Machinery Equipment Inspection		PS	API 570
PI	ATG G 19-34	MEI – Machinery Equipment Inspection		ST	API 653
PI	ATG G 19-34	MEI – Machinery Equipment Inspection		CR	ASME B30.2
PI	ATG G 19-34	SMI – Structural Members Inspection		BR	AWS D 1.1
PI	ATG G 19-34	SMI – Structural Members Inspection		WS	AWS D 1.1
PI	ATG G 19-34	RBI – Risk-Based Inspection		-	API 580
PI	ISO 18436	LA – Lubrication Analysis		-	
PI	ISO 18436	VA – Vibration Analysis		-	
PI	ISO 18436	IRT – Infrared Thermography		-	
WI	CWS ANB/IAB	TM – Technology Module **		-	
WI	CWS ANB/IAB	IWI – International Welding Inspector	B/S/C	-	
WI	AWS Q1	CRI – Certified Radiographic Interpreter		-	AWS D1
WI	AWS Q1	CWI – Certified Welding Inspector		-	AWS D1
TPI	ATG G 19-34	SHI – Shop Inspector		-	
TPI	ATG G 19-34	SII – Site Inspector		-	
TPI	ATG G 19-34	EX – Expediting		-	

* Trainings are provided in all standard levels. If level is not specified, it means level 1,2,3. In addition, ATG Group also teaches listed special techniques.

** The first 4 days of the BASIC Exam training can be waived after previous successful pass through the Technology Module (it doesn't work the other way round).

MS	Multisector	PV	Production and construction of equipment	CR	Cranes
w	Welds	I	Plastics	BR	Bridges
c	Castings	wp	Wrought products	WS	Welded Structures
t	Tubes	PE	Pressure Equipment	d	Direct Visual Testing
f	Forgings	PS	Pipe Systems	SWT	Spot Welds Testing
AS	Aerospace	ST	Storage Tanks		

Refresh courses are available on request. For further information about courses please visit www.atg.cz.

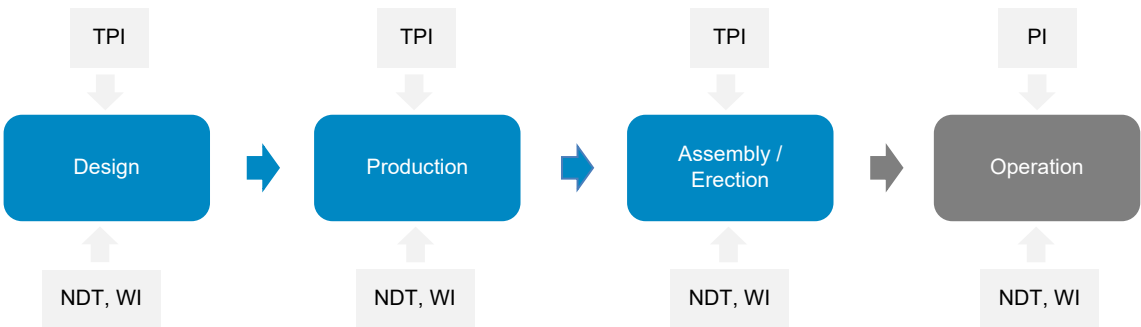
ATG GROUP INSPECTION AND TESTING ACTIVITIES

In order to produce and maintain industrial products fully functional, there is a set of regulations provided for the production and maintenance processes with strictness reflecting the level of danger from its operation. The compliance with these processes is verified by **inspection and testing** activities, which verify the functionality status and, in addition, ensure the fulfilment of industrial safety standards and regulations.

The inspection and testing activities of ATG Group include the following:

- Nondestructive Testing (NDT)
- Welding Inspection (WI)
- Plant Inspection (PI) including Corrosion Inspection
- Third-party Inspection (TPI)

Based on this, **ATG Group covers the inspection activities of the whole production and life in operation of industrial equipment.** As a result ATG Group provides both production process verification and product maintenance activities.



INSPECTION

Properly timed inspections of production process (it means at least design, manufacturing and expediting) is necessary for evidence of accordance with the agreed requirements. **ATG Group has the ability to provide inspection through all production stages** to assure compliance of the Producer with all Customer and law requirements.

Products in operation may lose their functionality or may represent a greater risk to operate after some period of time. ATG Group shall verify through the in-service and maintenance inspections the compliance with planned functionality and **is able to assess the residual life** of industrial sites on request.

The main inspection activities of ATG Group can be summarized as:

- Inspection and supervision of special processes (NDT and WI process)
- Inspection of deliveries of big units in the phases of shop manufacturing and site erection (TPI)
- Inspection of operated devices/equipment joined with analysis of damage induced by service (PI)

GEOGRAPHIC COVERAGE AND HUMAN RESOURCES

ATG Group uses both their own staff and staff of many partner organizations worldwide and thus it is able to cover shop & site inspections almost all around the World. The inspection staff is qualified through own ATG qualification or ISO, IAB/IIW, ASME, AWS, API, ASNT which provides high level of flexibility.

ATG Ltd. is contractual partner of Hartford Steam Boiler International with own ASME and PED authorized inspectors, furthermore ATG has inspectors approved by SAUDI ARAMCO, JGC, ADCO (Oil & Gas field), ALSTOM (Power generation) and GNS (Spent nuclear fuel transport & storage casks).

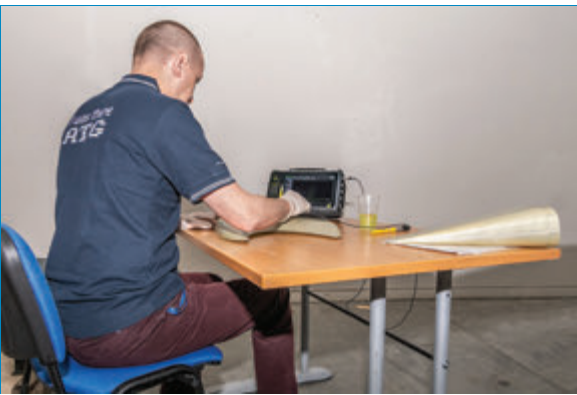
ATG Ltd. is also a member of **TIC (Testing, Inspection and Certification Council)**.

NONDESTRUCTIVE TESTING

Product quality is a main parameter of any industrial site. In order to assess the product quality and maximize it, testing during the production process needs to take place. NDT process is an exceptional tool that allows check of 100% of parts at considerable speed without any permanent damage induced.

ATG Group provides testing by qualified NDT level 2 personnel inhouse in Prague (CZ) and Trencin (SK) and is able to organize testing on Customer's site, both by own staff and/or outsourced staff, on ATG owned devices and equipment.

The range of testing may include mass testing of thousands of parts as well as individual tests as a support activity for Residual Life Assessment. These may be assessed by personnel qualified in all qualification systems (ISO 9712, SNT-TC-1A, EN 4179 / NAS 410 etc.), depending on request of the Customer.



TESTING UNDER EASA PART 145 D1 APPROVAL

Laboratory LET of ATG Ltd. company is approved by Czech Civil Aviation Authority (CAA, in Czech ÚCL) for testing acc. to EASA Part 145 (process D1, i.e. non-destructive testing), for all types of aircraft. Since 2021 it is also a holder of **Cessna Authorized Independent NDI Facility approval**.

ATG has a wide range of approved inspectors with experience from hundreds of aircraft tested, from small planes (Cessna, Piper, Bell) up to big planes of Airbus A3XX family.

Team of Laboratory LET is able to cover all conventional NDT methods used for aircraft maintenance. In addition it is able to perform testing of aircraft wheels with own ET Wheeltester AWT 950 in ATG Special Process House in Prague.



SPECIAL PROCESS HOUSE (SPH)

Special processes as NDT have important value-added for the company and therefore it is desirable for the company to implement them to their production process. In some situations it can be a mandatory requirement prior being included to the supply chain. This is often joint with necessity to get complex End User approvals or accreditations by PRI NADCAP or TPG.

In some cases, however, the organization is unable to provide this process alone and it is easier to pass this process to a reliable contractor, who will deliver the NDT process as a whole. Such situation usually occurs when this process is not part of core business portfolio of the company. Direct implementation of the process (purchase of equipment, personnel qualification, implementation of process QMS and acquisition of necessary approvals (End User approvals like Rolls-Royce, GE Aviation etc.) and accreditations (e.g. PRI NADCAP) is in such case for the given organization financially unfeasible.



ATG Group provides complete special process delivery as a supplier solution for a range of companies from the Czech Republic, Slovakia and Poland.

NONDESTRUCTIVE TESTING

ATG offers the full delivery of NDT process as follows:

- UT immersion testing for rotary parts in UT manipulator and standard testing of bars
- ET testing for aircraft discs and wheels and manual testing of cracks
- MPI of aerospace parts acc. to ASTM E1444, testing for automotive industry
- FPI of aerospace and automotive parts including all supportive processes acc. to ASTM E1417, **NADCAP accredited**
- RT/DR testing of aerospace and automotive parts (including composites) with digital output of radiographs

These processes are delivered as a **complete NDT process**, therefore including the following:

- Responsible person for given process as Level 3
- Qualified personnel Level 2 according to requested qualification and certification system
- Own equipment and consumables together with adjacent technologies
- Own procedures complying with Customer's requirements
- End user's approvals, accreditation of process (NADCAP)

ATG is focused on high quality NDT services for aerospace, transportation, pressure vessel, and piping systems and **is able to support own activities by certifications / accreditations / qualifications and references as NADCAP, TPG etc.**



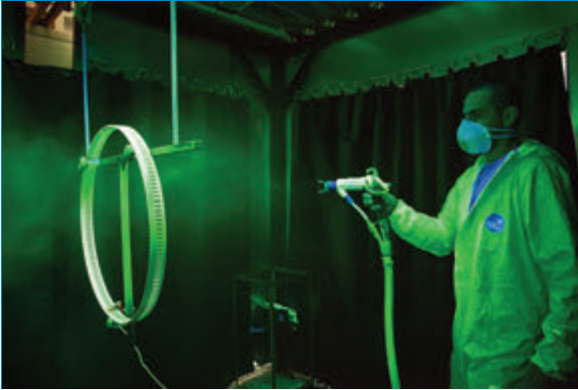
CLEANING AND CLEANLINESS VERIFICATION

New special process of cleaning and cleanliness verification was fully implemented in ATG in 2018. Process is primarily focused on **cleaning of new turboprop engines GE Catalyst from company GE Aviation Czech**. Process is approved by GE Aviation P4TF21 specification and is suitable especially for cleaning of critical aircraft components.

Process utilizes multilevel cleaning process, that may include one or more from the following: air pressure cleaning, cleaning by isopropylalcohol, ultrasonic cleaning and cleaning by water jet. All is performed in the pressurized clean room and with protective tools to minimize possible contamination of parts.

Cleanliness verification by optical microscope may be included in the process delivery. For this purpose ATG Ltd. utilizes outstanding optical microscopes from company NIKON. Current process is comfortably able to clean parts and verify the cleanliness level acc. to number of particles with particle sizes from 5 µm.

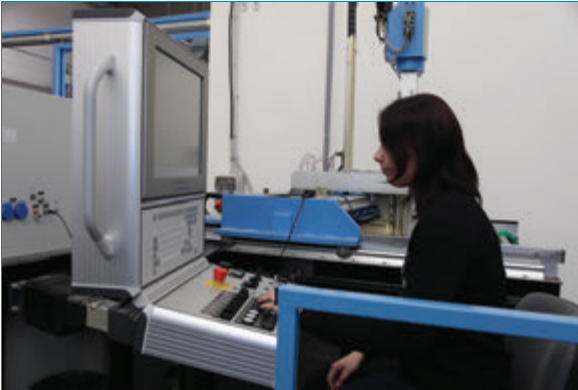
Due to its strict requirements created by the aerospace industry, this process is also suitable for use acc. to ISO 16 232 standard in e.g. automotive industry.



PT – TESTING OF RINGS (ROLLS ROYCE)



MT – TESTING OF BEARINGS (AEROSPACE)



UT – TESTING OF SHAFTS (CZ AUTO SYSTEMS)



DR – TESTING OF AXLES (ŠKODA AUTO/MOTORSPORT)



CL – CLEANING AND CLEANLINESS VERIFICATION OF VARIOUS PARTS (GE AVIATION)



WELDING INSPECTION

Welding process is the most important technical Special Process and permanent joining technology. This process is closely connected with NDT. Therefore, a lot of inspection activities of ATG Group are joined with welding inspection.

The coordination process of welding is described in e.g. ISO 14731 (previous EN 719), where the importance of the inspection of all phases of welding process is clearly explained. As it is defined, the whole welding process shall be planned and realized under control of coordination welding personnel as is e.g. **International Welding Engineer** or **International Welding Technologist**.

Nevertheless, all steps of welding process shall be inspected and verified against the governing documents, i.e. contract, or agreed production standards and codes, which are defined in the contract. Such inspection increases the probability of appropriate realization of agreed products. Somebody must be responsible for relatively independent assessment of conformity of all phases of welding process. This person is e.g. the **International Welding Inspector**.

ATG Group offers services for Second Party Inspection or Third Party Inspection by own staff or by hired, verified freelancers. Majority of ATG Group's Welding Inspectors have additional qualification in NDT process (NDT Level 2 or higher) with experience from providing of NDT services.

Welding Inspection and Coordination staff of ATG Group is qualified in IIW IAB system (IWI - International Welding Inspectors and IWE - International Welding Engineers) and AWS (CWI – Certified Welding Inspector) and experienced from many projects controlled by Alstom, ABB, Saudi Aramco, JGC, NET4GAS, RWE etc. on projects for manufacturing and erection of power plants, piping systems, refineries etc.

ATG has 4 International Welding Engineers IWE, 7 International Welding Inspectors IWI and 2 Certified Welding Inspectors CWI to support the Customer in coordination of welding process.



PLANT INSPECTION

The main reasons for inspection of in-service equipment are to:

- Determine the physical condition
- Determine the type, rate, and causes of equipment degradation
- Decide the following activities, which interpret and solve monitored state of inspected operated device

Active damage mechanisms and rates of degradation will vary markedly depending on the process flow and its contaminants or corrosion levels, temperature of exposure, and structural materials. One of the primary reasons for performing periodic inspections is to identify deficiencies and defects that could result in a safety incident – e.g. leaks, loss of containment, fire, toxic exposure. When identified, these are evaluated and (if needed) fixed through repair and further inspection immediately.

ATG Group inspectors utilize multiple DT and NDT methods and techniques in the inspection and evaluation of equipment condition. Inspectors consider the types of active degradation mechanisms and corresponding degradation modes active in the devices to determine the best methods and techniques to be used during the inspection process.

All information analyzed by ATG Group is carefully documented, provided to the Customer in agreed extent, which contributes to the planning of future inspections, repairs and replacements. Moreover this information may form the equipment history basis for remnant life assessment (RLA) and risk-based inspection (RBI).

INSPECTIONS ACCORDING TO API

For specific types of equipment working in Oil & Gas, in order to protect the public from fire, contamination or explosions, guidelines must be in place to ensure proper construction, installation, inspection, operation, maintenance, alterations, and repairs. Inspections according to API procedures are in principle similar to the “general” plant inspections, with exception of specific methodical requirements, evaluation algorithms and acceptance criteria that are applied.

Inspections are performed according to procedures encompassing the requirements outlined in industrially accepted codes as API 510 (pressure vessels), API 570 (piping systems), API 653 (storage tanks) or other standards for repair, maintenance, in-service inspections, and alteration.

ATG Group provides, as one of the very few training centers on the market, the qualification of Plant Inspectors according to API 510, API 570, API 580 and API 653. This is a noncompulsory, however highly recommended course, that targets at full understanding of the responsibilities of the plant inspector, including the extent of technical knowledge as well as comprehensive understanding of API standards.

The philosophy of API guides is the best methodology for maintenance of operated devices. This philosophy is even adopted out of Oil & Gas industry and can bring very beneficial results for the Customer in general.



CORROSION INSPECTIONS

ATG Group inspection activities in the field of corrosion cover main problems that the plant inspectors have to solve in everyday work. There are two principal subjects of ATG Group activities in this field that are applicable for both, design and production as well as in-service operation (maintenance):

- Corrosion/degradation of inspected part/equipment material
- Protective coatings and protective systems applied on inspected part/equipment and its state

Both of these topics are considered together as one system and together with API methodology can solve many challenges.

Material analysis

Material analysis is focused particularly on assessment of its applicability in defined working conditions, evaluation of type and extent of corrosion including corrosion rate and assessment/prediction of remnant life of the part.

Protective coatings analysis

Protective coatings are examined for compliance with required application conditions (surface preparation, cleanliness, temperature, relative humidity, curing time) and with required thickness, integrity, surface smoothness etc. Coating inspection of parts in service is focused on its damage, wear, erosion and other factors that can influence negatively corrosion resistance of the part.

Also temporary protective coatings (preservation) for transport or shut-down of equipment and protective systems, cathodic & anodic protections, can be inspected by ATG Group specialists including independent consultancy.

REMNANT LIFE ASSESSMENT

Industrial sites, as they are operated for longer time, may change their original conditions significantly. The site and its devices/parts may be subjected to many aspects, as mechanical damage, stress and strain from operation, corrosion and others. All these may cause, in the worst case, even a collapse of the site.

Remnant (or also Remaining/Residual) Life Assessment is an important type of inspection that assesses the remaining life by application of on-site inspection, series of calculations and extrapolation. It allows the owner to operate industrial sites longer than was the original projected life and due to that make significant cost and time savings.

Standard RLA consists of following steps:

- Collection of historical data
- Operational parameters vs. material properties evaluation
- Actual part condition inspection including destructive testing of samples
- Damage mechanism evaluation
- Remnant life calculation according to procedure/practice used
- Formulation of corrective measures and conditions for future operation including date of subsequent inspection

ATG Group possesses enough qualified staff with background from various fields and experience from real-life inspection on operating sites to provide the Customer with top-end quality of this complex and difficult service.





PLANT INSPECTIONS

SECOND AND THIRD PARTY INSPECTIONS

Second and Third Party Inspection involves independent assessment of items at their place of manufacture before delivery (shop) or during erection/assembly (site). The difference between Second and Third Party inspection is defined by relation to the Customer.

This is the most convenient and cost-effective way to determine for the Customer whether a product, service, process, piece of equipment or installation complies with expressed needs, Customer's expectations, applicable regulations or other specific requirements. The inspection plays an important role in order to avoid or minimize the risk of failures.

SHOP INSPECTION

Shop Inspection usually includes as follows (the actual scope of work is defined through inspection and test plan (ITP)):

- Design review
- Review of material certificates
- Visual inspection
- Non-Destructive Testing (NDT)
- Attendance review
- Supervision or performance of mechanical or functional tests
- Hydrostatic testing
- Painting and packing inspection including review of all relating documentation

SITE INSPECTION

Shop Inspection usually includes as follows (work conditions are more restricted than on the shop due to user regulations):

- Visual inspection of completed equipment and 100% testing of assembly welds
- Ultrasonic Testing of full penetration of all welds
- Conformity reviews of structural members (already fabricated) delivered to the project site
- Erection documentation review

Part of site inspection could be also the performance tests after assembly in real conditions of operation against shop status.

EXPEDITING

Expediting differs from inspection in their mission. Expediting does not focus on the quality of products but it maps the supply chain, its flow and timely delivery.

ATG Group is providing all kinds of mechanical, electrical and instrumentation inspections with our partners worldwide as the Third or Second Party. Our services are used by SAUDI ARAMCO, ADCO, JGC, ALSTHOM, GNS, NET4GAS etc.

ASME AND PED INSPECTIONS

Boilers and pressure vessels (or pressure equipment) production is under the control of the state, because these products are very dangerous and can cause a detriment on human being and human properties. Therefore a state shall care for own citizen safety and shall control this production. The law is similar in all countries and in EU it is defined in PED.

The ASME BPVC is the most widely used pressure equipment standard/code in the World. It is recognized also in EU as it can be in specific case utilized to fulfill requirements of PED (Pressure Equipment Directive 97/23/EC).

ATG Group offers all the necessary inspection and together with Hartford Steam Boiler certification services for fulfilling the requirements of the ASME International Boiler and Pressure Vessel Code.

ATG Group has also 3 ASME inspectors (able to cover AI, AIS, ANI).

NDT INTERLABORATORY PROFICIENCY TESTING ACC. TO ISO/IEC 17043

In the industry, there is a growing number of NDT organizations that claim to be providing qualified NDT services for their Customer. The general experience, however, shows that not all of them provide adequate level of proficiency. Government, as well as major corporations, wants to ensure, that the outsourced organization is adequate to requested purpose and implemented NDT process reflects a standard approach with defined quality.

Proficiency testing (ILPT) involves use of **inter-laboratory comparisons** to evaluate laboratory's performance and its on-going competence. Inter-laboratory proficiency testing (ILAC) is anonymous comparison and evaluation of participating organizations compared to strictly defined tasks and related objectives and by its principle provides essential information about the position of the organization's NDT laboratory compared to the competition, the overall performance and important reference for the organization's customer.

The whole process is described in ISO/IEC 17043 that specifies general requirements for the competence of providers of proficiency testing schemes and for the development and operation of proficiency testing schemes.

ATG Prague is the only accredited company in the Czech Republic and one of only few accredited organizations worldwide for Inter-laboratory Proficiency Testing for NDT according to ISO 17043. ATG Prague is accredited for this activity in all standard NDT methods.

EXTERNAL USE

Accreditation requirements

Participation on this program is required by accreditation bodies for repeated evaluation of proficiency ability of accredited laboratories according to ISO/IEC 17025.

Marketing opportunities

Participants passing successfully through Proficiency Testing Programs can present and demonstrate its competence assessment realized by Accredited Body to their customers and significantly increase their value compared to the competition missing this assessment or performing worse in the given program.

INTERNAL USE

Continuous improvement

ILPT provides to the organizations monitoring tool of its own NDT process in comparison with other participants of given programs and by that defines weak and strong points of their NDT process. This may enhance the company Quality Management System development as well as continuous improvement (requirement of ISO 9001).

APPLICATION FOR ORGANIZATIONS OUTSOURCING NDT PROCESS

Investors and companies outsourcing NDT process from secondary organizations need to evaluate their contractors on regular basis and compare them. ILPT according to ISO/IEC 17043 provide an independent tool for validation of professional competence of possible or current NDT suppliers and motivate suppliers to increase their performance.

In order to increase efficiency of the program, ATG customizes the Proficiency Testing program model according to Customer's requirements, but as the third party, keeping maximal impartiality.

ATG GROUP OUTSIDE AGENCY ACTIVITIES

All special processes (and NDT especially) are governed by strict requirements for quality management and procedural base of the process. **The person responsible for assurance of these requirements is the NDT Level 3 appointed and authorized by the Employer.**

ROLE OF NDT LEVEL 3 IN NDT PROCESS

NDT Level 3 controls the whole performance of NDT process on Employer side and he/she is its technical manager. He/she is fully responsible against the law and the Customer.

The described activities are not relevant only for the Employer certification systems as SNT-TC-1A or EN 4179 / NAS 410. It is applicable for all systems including independent qualification system ISO 9712.

ISO 9712 is different from the point of view of NDT Level 3 in using certification body for performance of the certification act. Nevertheless the duties and responsibilities of NDT Level 3 in operation of company NDT process are the same. Although the institution of Outside Agency is not mentioned in ISO 9712, the equivalent can be utilized through outsourcing of external NDT Level 3.

CONTROLLING ROLE OF NDT LEVEL 3

NDT Level 3 controls the whole operation of NDT process and he/she is responsible to the authorities, certification or accreditation bodies and the Customer for the whole NDT process in given method.

In case of absence of own Employer's NDT Level 3, the Employer may nominate to fulfill all (or a part of) NDT Level 3 responsibilities to outsourced **Outside Agency**, which can substitute requested activities of responsible person for given special process and method (see ASNT Recommendation SNT-TC-1A or EN 4179 / NAS 410, which are the most important Employer certification systems). The Employer is responsible for right choice of this Outside Agency and therefore the ability of the Outside Agency shall be proved and documented.

The Outside Agency shall be officially authorized in written form by the Employer, because the Outside Agency takes responsibility for given part of activities of Employer's NDT designated Level 3 on the contractual base.

ATG Group offers Outside Agency (or NDT Level 3) services for the whole NDT process in full range as follows:

- Services of NDT (Responsible) Level 3
- NDT personnel qualification acc. to chosen qualification system
- Supervised collection of experience acc. to requirements of qualification system
- Written Practice and Written Procedure / Instruction processing
- Calibration process
- Auditing of NDT process and Performance Evaluation
- Continuous (Annual) Proficiency Review (Technical Performance)
- Continuous supervision/auditing of the whole process and system (e.g. NADCAP, TPG and ASME audits)

ATG Group is backed by **30 years of experience**, **more than 20 skilled NDT Level 3** personnel and **more than 180 references** in production and maintenance sectors in various industries. ATG Group can provide these services in Czech, English and Russian language.

NDT PERSONNEL QUALIFICATION

Correct execution of NDT process is mostly dependent on the quality of personnel qualification. Comprehension of the whole process including all its parts and all relevant requirements is vital for correct, properly documented execution of the NDT process.

NDT personnel qualification in aerospace is predominantly covered by qualification system defined by EN 4179 / NAS 410 (these standards are identical). The other production sectors are mostly supported through ASNT Recommended Practice No. SNT-TC-1A.

Outside Agency of ATG Group shall prepare and define personnel qualification process of Employer's NDT staff exactly according to his requirements and needs with respect to the obligatory requirements of EN 4179 / NAS 410 or SNT-TC-1A. All these conditions and requirements are defined in special procedure of the Employer, so-called **Written Practice**.

The whole qualification shall be focused on the Employer's production or maintenance program including use of Employer's Written Procedures for specific and practical part of qualification. The training, for the Employer's convenience, may be performed directly in his facility, on his NDT equipment and his samples.

WRITTEN PRACTICE AND WRITTEN PROCEDURES PROCESSING

Every special process shall be controlled through the right, documented procedural base. This base describes and defines the whole process, beginning with personnel qualification requirements and finishing with calibration procedures.

NDT Level 3 is responsible for qualification of own NDT staff of Level 1 and 2 especially. All requirements for such qualification must be defined in detail in so-called **Written Practice** document. This Written Practice is an implementation of general qualification standards to the Employer's specific conditions.

All NDT methods of the Employer must be performed according to specifications, such as **Written Procedures and Instructions**, which define all obligatory features and conditions for given method and follow production standards and codes used in the Employer's production/maintenance process. NDT Level 3 personnel is responsible for creation, implementation, approval and supervision of these conditions that are defined in the Written Procedure.

Outside Agency of ATG Group may substitute such activities for the Employer at all levels. The documents are produced according to standards and specific requirements, approved for correctness by Employer and their implementation and compliance can be supervised by the Agency on behalf of the Employer.

SUPERVISED COLLECTION OF EXPERIENCE BEFORE CERTIFICATION

Personnel becomes proficient to perform NDT tasks by gaining sufficient knowledge and skills in the given NDT method (and technique). Training and collection of experience are the only two parts of the qualification process, that may serve for gaining and strengthening of knowledge and skills. Other parts (education, examination and vision acuity) are only entry conditions, or verification instruments to confirm acquisition of knowledge and skills at a particular level and they do not participate directly on reaching the proficiency.

Experience collection has by far the biggest impact on proficiency of the personnel to perform tasks. It ensures, that given person knows how to use gained knowledge properly and transform them into skills. Gaining particular skills cannot be achieved only by completing specific number of experience hours. It is necessary to ensure that the experience include in sufficient amount all key activities that become automatic skills.

Supervised collection of experience has focus on gaining of following skills (example: NDT Level 2):

- Correct selection of test technique
- Ability to choose test procedure (including preparation of written instruction if relevant)
- Equipment calibration and setup
- Securing proper test conditions
- Performing test correctly acc. to defined requirements
- Evaluation of test results acc. to correct criteria
- Correct reporting of test results to the test report
- Performing all proper measures and steps after the test



for all techniques implemented in the given method by the customer, for which the personnel is certified.

ATG Group provides supervised collection of experience by NDT Level 3 personnel, that is focused to cover all key activities in sufficient amount, on equipment and parts from real production or operation, that are representative to the future performance activities the personnel will face in real operation. Process fully complies with the requirements of the customer's Written Practice and may use his internal documentation. This service may be performed also on customer's premises on his equipment.

CONTINUOUS PROFICIENCY REVIEW

The quality of NDT process has to be continuously supervised and inspected by responsible person and that is the NDT Level 3. Proficiency of personnel performing NDT tasks is not given by just satisfying the entry conditions for certification, it may be developing through time to the better or worse. Continuous (usually Annual) Proficiency Review (also called Performance Evaluation or Technical Performance) of all NDT staff by NDT Level 3 is not only a requirement of SNT-TC-1A or EN 4179 / NAS 410, but it is the most important task in Quality Management System of each NDT department.

Outside Agency of ATG Group is able to implement and manage a detailed review process of technical proficiency of NDT personnel including implementation of corrective actions and by that to ensure NDT process execution at high quality on behalf of the customer. The process is set to satisfy the customer's Written Practice and it is usually performed on customer's premises, on his equipment, test samples and real tested parts.

AUDIT OF NDT PROCESS

Quality management of NDT process is very important part of every production / maintenance process and the employer is directly dependent on its continuous improvement. Auditing allows the employer to continuously monitor and control the process and take actions depending on the result of the audit.

Outside Agency of ATG Group can provide internal auditing for the employer or independent third party auditing for the customer by experienced and reputable auditors with strong background in the NDT process.

ATG Group also provides own special qualification course for auditors working in NDT process. This course can be included in the employer qualification and certification system (Written Practice) to prepare own qualified and skilled auditors, who can increase reliability, quality and credibility of the customer's NDT process.

AUDIT SUPPORT FOR PROCESS AND SYSTEM AUDITS (NADCAP, TPG, ASME)

Industries with increased requirements for safety during operation as e.g. transportation (especially aerospace and railways), petrochemical and power industry (especially nuclear) require thorough fulfilment of even the most strict requirements for the given special process (NDT, welding, heat treatment, chemical processing etc.).

Common requirement of the End Users is usually a request to satisfy specific criteria for the given product or the End User. Suppliers of these End Users then have to satisfy detailed customer requirements and pass through a series of (often complicated) customer's audits (Rolls Royce, GE, Embraer etc.) or audits of a third party, which in a specific scope represents the customer (typical example is e.g. NADCAP in aerospace and defense industry, TPG in railways or ASME in manufacturing of pressure vessels).

Preparation for such approval usually means requirement for reconstruction of the quality management system of the given special process and adjustment of this quality management system to the requirements of the customer, or the third party. That may usually include following activities:

- Complete review of the process documentation (in NDT it is especially Written Practice, Written Procedures, ...)
- Thorough (re)qualification with conclusive experience
- Management of equipment and their calibration
- Securing full traceability of records

Outside Agency of ATG Group provides support with preparation for End User audits and communication with End User's auditors or the auditors of the delegated third party (e.g. NADCAP) in order to maximize the chance of audit's success. The service provides support for resolving of corrective actions and strategy to assure longtime sustainability and development.

Outside Agency of ATG Group provides audit support to its customers not only in NDT, but also in other special processes, e.g. welding and heat treatment.

REFERENCES

PRODUCTION AND EQUIPMENT

Magnetic Particle Testing

- AZUR AIR, Turkey
- HANWA AEROSPACE, South Korea
- IGW, Belgium
- KINEX (Honeywell), Slovakia
- RYKO, Czech Republic

Penetrant Testing

- FAGOR EDERLAN (BMW), Spain
- GE AVIATION, Czech Republic
- PRATT&WHITNEY, Poland
- TAE AEROSPACE (GE, Pratt&Whitney), Australia

Ultrasonic Testing

- KINEX (Honeywell), Slovakia
- LA Composite, Czech Republic
- PCC (RollsRoyce, GE, Snecma), Czech Republic

Eddy Current Testing

- IBERIA and IAG, Spain
- KOREAN and ASIANA AIR LINES, South Korea

QUALIFICATION AND CERTIFICATION

EN ISO 9712

- FORCE, Denmark
- HEESCO (Ministry of Oil), Iraq
- POWER SPECIALISTS ASSOCIATION Inc., USA
- SANDVIK, Czech Republic
- TUV NORD, India

SNT-TC-1A

- DISCOVERY DRILLING EQUIPMENT, Ukraine
- MOODY, Germany
- SSFAT, Kingdom of Saudi Arabia

EN 4179 / NAS 410

- AKKA, France
- GARDNER, Poland
- KOREAN AIR LINES, South Korea
- MB AEROSPACE, Taiwan

International Welding Inspectors

- RWE, Czech Republic
- TÜV SÜD, Germany

TESTING AND INSPECTION

Mass NDT testing (Special Process House)

- PCC (Snecma, Rolls Royce), Czech Republic
- RBC BEARINGS, Poland
- SEKO (Pratt&Whitney), Czech Republic
- ŠKODA MOTORSPORT, Czech Republic

Remnant Life Assessment (RLA)

- BANIAS GCG POWERPLANT (Banias GCG), Syria
- BAIJI REFINERY, Iraq

Cleaning and Cleanliness verification

- GE AVIATION, Czech Republic
- HEGGEMANN, Germany
- MB AEROSPACE, Poland

Inspections

- ADCO, United Arab Emirates
- GAZELLE (Net4gas), Czech Republic
- JGC, Japan
- SAUDI ARAMCO, Kingdom of Saudi Arabia

OUTSIDE AGENCY SERVICES

PRI NADCAP support

- AERO VODOCHODY AEROSPACE, Czech Republic
- GE AVIATION CZECH, Czech Republic
- HONEYWELL, Czech Republic
- LATECOERE, Czech Republic
- ROSPOLYMET, Russian Federation
- SEKO AEROSPACE, Czech Republic

PRI TPG support

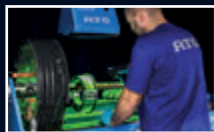
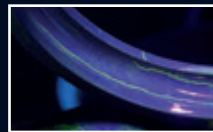
- ČKD KUTNÁ HORA, Czech Republic
- UNEX UNIČOV, Czech Republic

Supervised collection of experience

- GARDNER, Poland
- RBC BEARINGS, Poland

Proficiency Testing for NDT acc. to ISO/IEC 17043

- QTEC-QUALYNSPECT, Portugal
- ROLLS-ROYCE POWER ENG., United Kingdom
- TUV NORD SYSTEMS, Germany



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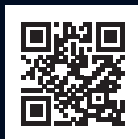
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