



DUAL man S.R.L.
BUCHAREST - ROMANIA

Company presentation

History of DUAL Group

- 1991: start-up with fully private Romanian capital;
- Growth exclusively by re-investing profit in acquiring state-of-the-art equipment and technology, upgrading workshops, implementing new management systems and tools;
- Diversified experience, high quality products and services, turn-key projects for infrastructure and industry;
- Integrated Quality (ISO 9001:2015) – Environment (ISO 14001:2015) – Health & Safety (OHSAS 18001:2007) management system certified by Lloyd's Register, numerous authorizations and certifications for welding, various other agreements, qualifications, authorizations and certifications available on demand;
- Flexibility: defining product ranges to customer's requirements and needs and to market evolutions, workforce training;
- Good market position, serious and reliable partner;
- Annual turnover: cca. 7.5-9 million Euro;
- Export: 55-60% of production;
- Workforce: cca. 200 employees;
- Yearly financial reports audited by Deloitte since 2002;

REFERENCES (selection)

AEDIFICIA Carpați (RO)

AEROTEH (RO)

Alstom Transport (B, CH, I, RO)

Andritz Pulp & Paper (S)

Bucharest Street Administration(RO)

CFR (Romanian Railways)

Dacia – Groupe Renault (RO)

ELBA COM (RO)

Felix Telecom (RO)

FLASH LIGHTING (RO)

IMSAT – Groupe SNEF (RO)

LINCOLN ELECTRIC FRANCE (F)

Loial IMPEX (RO)

MARTIFER (RO)

Naval Authority(ANR)

National Road Infrastructure(RO)

Siemens (A, D, RO)

VESTA Investments (RO)

Production facilities

- Land 100.000 m²
- Workshops 52.000 m²
- Warehouses 9.000 m²



Certifications

The integrated quality-environment-health and safety management system of the company **DUAL MAN** was certified by **Lloyd's Register** according to standards **ISO 9001:2015, ISO 14001:2015** and **OHSAS 18001:2007**

DUAL MAN is authorized supplier of **AFER, Electrica, ENEL, ALSTOM TRANSPORT, SIEMENS** etc.

Lloyd's Register

Certificate of Approval

This is to certify that the Management System of:
Dual Man SRL
Head-Quarter: 9 Doina Street, 5 District, Bucharest, Romania
Work Point: 3D Preciziei Street, 6 District, 062202 Bucharest, Romania

has been approved by LRQA to the following standards: **ISO 9001:2015**

Gilles Bessiere - Area Technical Manager
Issued by: Lloyd's Register (Romania) (Srl)
for and on behalf of: Lloyd's Register Quality Assurance Limited

Current issue date: 14 September 2018 Original approval(s):
Expiry date: 21 October 2021 ISO 9001 – 14 October 2003
Certificate identity number: 10135718

Approval number(s): ISO 9001 – 0040450

The scope of this approval is applicable to:
Design, manufacturing, assembly, service and sale of: metal structures, parts and products, metal poles and fixtures for telecommunications, lighting and LEA 04-20kv, towers and steel structures for telecommunications and electric power installations, equipment for telephone switching and distribution, enclosures, cabinets, racks, containers, shelters, GSM sites, urban utility metal constructions, rolling stock, equipment's for railroad, subway and tramway infrastructures, machine tools and industrial equipment's, storage and handling systems and equipment's, lockers, filing cabinets, metal furniture for offices and archives, structures in aluminum profiles and glass; construction and civil works; building and assembly works; steel structures to support road signaling panels for road infrastructure: poles, cantilever masts, gantries, metal fences; hot dip galvanizing; liquid painting and electrostatic powder coating; general contracting.

Lloyd's Register (Romania) SRL, Soseaua Iancului Nr. 31, Et. 3, Sect. 2 027176 Bucharest Romania for and on behalf of Lloyd's Register Quality Assurance Limited, 1 Trinity Park, Botolph Claydon, East Angles, Suffolk IP85 2TH, United Kingdom

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has been approved by LRQA to the following standards: **ISO 14001:2015**

Gilles Bessiere - Area Technical Manager
Issued by: Lloyd's Register (Romania) (Srl)
for and on behalf of: Lloyd's Register Quality Assurance Limited

Current issue date: 14 September 2018 Original approval(s):
Expiry date: 21 October 2021 ISO 14001 – 14 December 2006
Certificate identity number: 10135721

Approval number(s): ISO 14001 – 0040451

The scope of this approval is applicable to:
Design, manufacturing, assembly, service and sale of: metal structures, parts and products, metal poles and fixtures for telecommunications, lighting and LEA 04-20kv, towers and steel structures for telecommunications and electric power installations, equipment for telephone switching and distribution, enclosures, cabinets, racks, containers, shelters, GSM sites, urban utility metal constructions, rolling stock, equipment's for railroad, subway and tramway infrastructures, machine tools and industrial equipment's, storage and handling systems and equipment's, lockers, filing cabinets, metal furniture for offices and archives, structures in aluminum profiles and glass; construction and civil works; building and assembly works; steel structures to support road signaling panels for road infrastructure: poles, cantilever masts, gantries, metal fences; hot dip galvanizing; liquid painting and electrostatic powder coating; general contracting.

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Dual Man SRL
Head-Quarter: 9 Doina Street, 5 District, Bucharest, Romania
Work Point: 3D Preciziei Street, 6 District, 062202 Bucharest, Romania

has been approved by LRQA to the following standards: **OHSAS 18001:2007**

Gilles Bessiere - Area Technical Manager
Issued by: Lloyd's Register (Romania) (Srl)
for and on behalf of: Lloyd's Register Quality Assurance Limited

Current issue date: 14 September 2018 Original approval(s):
Expiry date: 12 March 2021 OHSAS 18001 – 14 December 2006
Certificate identity number: 10135723

Approval number(s): OHSAS 18001 – 0040452

The scope of this approval is applicable to:
Design, manufacturing, assembly, service and sale of: metal structures, parts and products, metal poles and fixtures for telecommunications, lighting and LEA 04-20kv, towers and steel structures for telecommunications and electric power installations, equipment for telephone switching and distribution, enclosures, cabinets, racks, containers, shelters, GSM sites, urban utility metal constructions, rolling stock, equipment's for railroad, subway and tramway infrastructures, machine tools and industrial equipment's, storage and handling systems and equipment's, lockers, filing cabinets, metal furniture for offices and archives, structures in aluminum profiles and glass; construction and civil works; building and assembly works; steel structures to support road signaling panels for road infrastructure: poles, cantilever masts, gantries, metal fences; hot dip galvanizing; liquid painting and electrostatic powder coating; general contracting.

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Structure of industrial production

The production activity of **DUAL MAN** is conducted in 4 units in Bucharest:



**Structural steel factory
(includes the pole production unit)**



**General mechanics and
machining factory**



Sheet metal products factory



Hot dip galvanizing plant

Structural steel factory

- CNC Plasma & Oxi cutting machines (L_{\max} 12 m);
- CNC press-breaks – 6 controlled axes (max. #13mm, L_{\max} 12 m);
- CNC press-breaks – 6 controlled axes (max. # 7 mm, L_{\max} 9 m);
- CNC punching machine (max. # 25 mm, max. \varnothing 30 mm);
- CNC cutting and drilling line for rolled profiles (L_{\max} 18m; W_{\max} 1,000 mm);
- CNC profile and hollow sections bending machines;
- Mechanized lines for longitudinal welding;
- Specialized welding robot (L_{\max} 7m; mass of parts to be welded max. 1.000 kg);
- 20-ton bridge-cranes.



General mechanics and machining factory

- CNC milling and boring machines ($L_{\max} = 6 \text{ m}$, $H_{\max} = 2 \text{ m}$);
- CNC milling center;
- CNC milling portal ($L_{\max} = 10 \text{ m}$, $I_{\max} = 1.5 \text{ m}$, $H_{\max} = 1.5 \text{ m}$);
- CNC lathes;
- Profile & tubes bending machine;
- Vertical lathes (max. $\varnothing 1.6 \text{ m}$);
- Grinding machine ($L_{\max} = 2 \text{ m}$);
- Classic machine-tools (turning, grinding, milling, boring)
- Horizontal press-breaks (100÷330 tf)



Sheet metal products factory

- CNC LASER cutting machines 3.2 KW (max. # 20 mm);
- CNC punching machines (max. #6 mm, $L_{max} = 3$ m, $W_{max} = 1.5$ m);
- CNC press-breaks with 6 controlled axes ($L_{max} = 2.5$ m);
- Tandem bending machines with max length 8 m
- CNC steel sheet rolling machine (max. #20 mm, $W_{max} = 1.5$ m);
- CNC spinning machine (max. $\varnothing 2.2$ m);
- Mechanical and hydraulic presses (max. 200 tf);
- Manual & automated powder coating line;
- MIG/MAG, TIG/WIG welding systems.



Hot dip galvanizing plant

Standard EN ISO 1461, DUROZINQ® technology under franchise FONTAINE (Germany) since 2004.

Largest hot dip galvanizing kettle in Romania :
12.5 x 1.6 x 2.6 m (L x W x D)

Max size pieces (1 immersion): 12.0 x 1.5 x 2.0 m

Max size pieces (2 immersions): 15.5 x 1.5 x 3.5 m

Max part weight: 4.7 tons



Welding Certifications

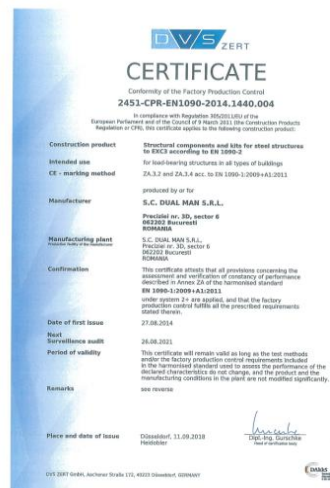
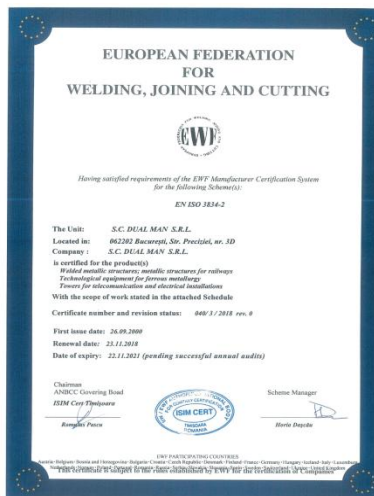
- ✓ European Federation for Welding, Joining and Cutting (EFW)
- ✓ International Institute of Welding (IIW)
- ✓ Welding Association of Germany (DVS)
- ✓ Welding Institute GSI SLV-München (Germany)
- ✓ Welding and Material Trial Institute ISIM Timișoara

The welding certifications of DUAL MAN concern conformity with the following standards:

- SR EN ISO 3834-2 – Complete quality requirements for welding by melting of metallic materials;
- SR EN 1090-2 – Technical requirements for the design and execution of welded steel structures (quality requirements EXC3)
- EN 15085-2 – Quality requirements for welding railway vehicles and subassemblies thereof (execution class CL1)

DUAL MAN holds certifications for the welding processes 111 (manual welding), 135, 136 (MAG welding), 141 (WIG welding) and 786 (stud welding) for the range of weldable materials S235, S275, S355, S420, S460 and group 8.1 (stainless steel);

The qualifications for the WPARs and welders are issued by SLV Munchen and/or ISIM Timișoara.



Qualified welding processes

DUAL MAN has qualified personnel for various welding processes

- MIG electric arc welding in inert gas with tubular electrode or tubular wire
- MAG electric arc welding in active gas with tubular electrode or tubular wire
- WIG/TIG electric arc welding in inert gas with Wolfram electrode
- electric welding by pressure points
- stud welding
- exothermic welding (copper-copper, copper-steel)

Over 50 automatic, mechanized or manual equipments are the technical resources used for welding :

- > carbon steel
- > stainless steel
- > aluminum alloys

High purity gases are used with the welding line and equipments (CO₂, Ar, M21), as well as for the cutting machines (laser: O₂, N₂, He, CO₂; plasma: O₂).



Surface protection by powder coating and liquid painting

- **Automatic shot-blasting tunnel**
16x1.6x1m (LxWxH);
- **Manual shot-blasting cabin**
13x5x4m (LxWxH);
- **4 liquid painting cabins**
13x5x4m (LxWxH);
- **High capacity automatic and manual powder coating line**
max. part size: 3 x 1.5 x 1 m (LxWxH)



PRODUCTS

Design / engineering, fabrication and on-site installation

STEEL STRUCTURES

Towers for communications, GSM antennae
(max. 145m tall)

Monopoles for communications, GSM antennae
(max. 40 m tall)



PRODUCTS

Design / engineering, fabrication and on-site installation

STEEL STRUCTURES

**Metal structures for buildings / construction
Structural steel for industrial applications**



PRODUCTS

Design / engineering and fabrication:

Industrial steel structures:

- Access platforms
- Industrial gangways
- Support pylons for billboards
- Handrails



PRODUCTS

Metal poles for street lighting (height: 4 - 40 m)

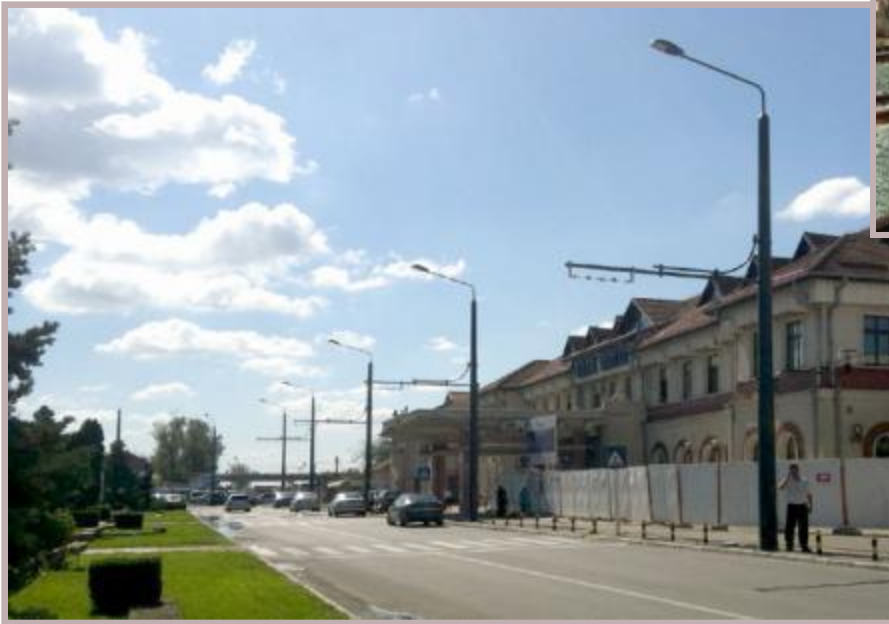
Types:

- Cone-shaped or cylindrical;
- Polygonal / circular section;
- Ornamental.



PRODUCTS

Poles and gantries to support contact lines for urban transport and railway.



PRODUCTS

Monopoles for flood-light systems up to 40 m tall



PRODUCTS

Design / engineering, fabrication and on-site installation MOTORWAY INFRASTRUCTURE ELEMENTS

Gantries and consoles for supporting:

- orientation signs;
- variable message boards VMS;
- video cameras.



PRODUCTS

Products and services for railways and subway

Railway products designed in-house and homologated/endorsed by AFER:

- GSM-R tower & container, CE container for telecommunication and railway signaling;
- Rigid gantries to support contact power lines;
- Luminous signals and indicators;

Standardized railway products:

- H poles to support contact line, metallic accessories for catenary network

Railway & subway services endorsed by AFER:

- Anti-corrosion protection by painting, hot dip galvanizing



PRODUCTS

Design / engineering and fabrication :

SHELTERS AND CONTAINERS

- Telecommunication equipment
- Electrical equipment
- Other applications



PRODUCTS

Design / engineering and fabrication: RACKS AND CABINETS

Indoor & outdoor, various applications:

- telecommunications
- electric power distribution
- electro-generators
- IT applications



PRODUCTS

Design / engineering and fabrication:

Shelves and goods handling equipments



PRODUCTS

INDUSTRIAL MACHINERY AND MECHANICAL PARTS



Special machine-tools for on-site machining



Equipments for metal industry



Machinery and equipments for various industries



Website: www.groupdual.ro

Contact:

**3-D, Preciziei Street
062202 Bucharest 6, ROMANIA
Tel.: +40 21 425 67 70
Fax: +40 21 425 67 90
E-mail: dualman@groupdual.ro**

Thank you!