

Atatürk Bulvarı No: 193
Kavaklıdere / ANKARA
Phone: 0 312 417 12 00
Fax: 0 312 417 52 05

Reference No: 4/503049-956

26/04/2016

DOCUMENT

Reference: Your letter of the date 26/04/2016.

BARAN ÇELİK VE GALVANİZ SANAYİ LTD. ŞTİ., our member with the registry number 3049 had filed an application at our Chamber and requested a document indicating data concerning their quantity of production in case they maintain works for three shifts at their factory located at the address Saray Mahallesi Dağyaka Caddesi No: 4 KAZAN / ANKARA.

Subsequent to the inspection of the capacity report by our Chamber's experts, the following conclusion was reached regarding works maintained for three shifts:

Power transmission line poles, GSM, TV and radio link antenna towers, range and lighting poles and steel construction: $14.844 \times 3 = 44,532$ tonnes per annum.

This document had been drawn and approved by our Chamber for submission to the relevant authorities and issued to the applying member.

Best regards,

//Signature// //Seal//

Caner HASTAŞ
Documentation Works Manager



TURKISH UNION OF CHAMBERS AND EXCHANGE COMMODITIES CAPACITY REPORT



ANKARA CHAMBER OF INDUSTRY

Report Date: 26.03.2016
Report No: 2016/202

Date of Expiry
28.03.2018

Trade Title of Company: **BARAN ÇELİK VE GALVANİZ SANAYİ LTD. ŞTİ.**

Industry Reg. No.:
Chamber Reg. No.: 3049
Trade Reg. No: 68852
Activity Code: 25.11.06
(NACE)

Registered Trademark:

Tax Department/ No HİTİT Tax Department / 1410020253

Workplace Soc. 225610101017811100626

Sec. Number:

Central Reg.

No:

Workplace Address : Saray Mah. Dağyaka Cad. No: 4 KAZAN / ANKARA

Communication Information

Workplace Tel (with code) : 312 -8154179

Fax: 312-8155353

E-mail: barancelik@barancelik.com.tr

Web: www.barancelik.com.tr

Office and Administration Centre

Address:

Office Tel (with Code)

Fax:

Manufacturing Activities: Energy transmission lines, steel construction and hot – dip galvanizing works, GSM antenna poles, polygon – illumination poles

Manufacturing Status	Capital – Equities Status (TRY)	Personnel Status
Owner: 26.925		Engineer : 5
Land (m ²)		Technician : 4
Total covered	Machines & Equipment: 4.391.516	Master : 5
Area (m ²) 9.448	Registered Capital 1.620.000	Worker 102
Building		Adm. Pers. : 22
Cons. Type: R.CONCRETE		Apprentice : 138

Date of Start of Manufacturing Activities: 12.02.1988

Foreign Capital			Intangible Rights			
Country	Company	Rate (%)	Patent	Know How	License	Country

This report including the product manufacturing capacity of the machines and tools existing at the workplace, features of which are given above belonging to the operation trade title of which is given above which is calculated over 300 business days in a year, on daily working basis of 8 hours according to the criteria and methods in force as well as the consumption capacities of the main, auxiliary and packaging materials was given by our party on 26.03.2013.

REPORTER AYTUL DUZGUN ULUSOY Chemical Engineer Signed	EXPERT 1 SIMLA TOPRAK Mechanical Engineer Signed	EXPERT 2
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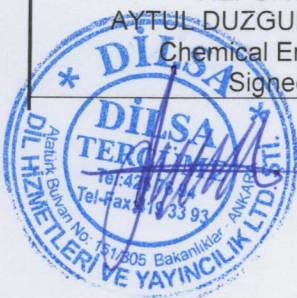


TABLE: I MACHINERY AND EQUIPMENT (OF THE COMPANY)

ADDRESS: Saray Mah. Dağyaka Cad. No: 4 KAZAN / ANKARA

Mach. Code	Qty	Description and Tech. Features	Score	Local/Imported	Power (KW)
28. 41. 32	1	FICEP RAPID 25 T CNC ANGLE TRIM STAPLING, CUTTING MACHINE	0	I	0.0
28. 41. 32	1	FICEP HP 12 T4 CNC ANGLE TRIM STAPLING, CUTTING MACHINE	0	I	0.0
28. 41. 32	1	FICEP 16.36.NT. CNC ANGLE TRIM STAPLING, CUTTING MACHINE	0	I	0.0
28. 41. 32	1	FICEP 16.34.NT. CNC ANGLE TRIM STAPLING, CUTTING MACHINE	0	I	0.0
28. 41. 32	1	FICEP 166 T CNC ANGLE TRIM STAPLING, CUTTING MACHINE	0	I	0.0
28. 41. 32	1	FICEP P803A CNC SHEET PROCESSING MACHINE (FOR FLAG)	30	I	0.0
28. 41. 32	1	FICEP HP16 T6 CNC ANGLE TRIM STAPLING, CUTTING MACHINE	0	I	0.0
28. 41. 32	1	FICEP P51 CNC SHEET PROCESSING MACHINE (FOR FLAG)	30	I	0.0
28. 41. 32	2	UNIVERSAL CUTTING DRILLING STAPLING MACHINE	0	L	0.0
28. 41. 32	1	FICEP BRAND UNIVERSAL CUTTING DRILLING STAPLING MACHINE	0	I	0.0
28. 41. 32	1	FICEP BRAND UNIVERSAL CUTTING DRILLING STAPLING MACHINE (FOR FLAG)	15	I	0.0
28. 41. 33	1	ECCENTRIC PRESS 40 TONS	37	L	0.0
28. 41. 33	1	ECCENTRIC PRESS 60 TONS	47	L	0.0
28. 41. 33	1	HYDRAULIC PRESS 180 TONS	91	L	0.0
28. 41. 33	1	HYDRAULIC PRESS 100 TONS	63	L	0.0
28. 41. 33	1	HYDRAULIC PRESS 75 TONS	53	L	0.0
28. 41. 32	3	AUTOMATIC GUILLOTINE SHEARS (1 M, 1.5 M, 2 M)	39	L	0.0
28. 41. 22	3	PILLAR DRILL	60	L	0.0
	8	DESKTOP POWER DRILL	80	L	0.0
28. 22. 14	20	OVERHEAD TRAVELLING CRANE	1000	L	0.0
28. 41. 24	2	BELT SAW	12	L	0.0
28. 41. 31	1	TANDEM BENDING PRESS (1200 TONS)	291	L	0.0
28. 41. 11	1	CNC PLASMA STAND (2 M X 4 M)	60	L	0.0
28. 41. 11	1	CNC OXYGENIC CUTTING STAND	22	L	0.0
28. 41. 22	1	CNC HOLE DRILLING STAND	40	L	0.0
27. 90. 31	16	TIG WELDING MACHINE	480	L	0.0
28. 41. 21	1	UNIVERSAL TURNING LATHE PA 2.5 MT	15	I	0.0
28. 41. 24	2	PLANING MACHINE (70 CM – 50 CM)	16	I	0.0
28. 41. 11	1	AUTOMATIC COPY, FLAME RADIAL CUTTING	11	L	0.0
	6	TRANSPORTER VEHICLE (4 WHEELS)	30	L	0.0
	4	OXYGEN WELDING SET	40	L	0.0
27. 90. 31	5	WELDING GENERATOR	125	L	0.0
	5	NUMERATOR STAND	0	L	0.0
	2	GENERATORU (167 KW, 354 KW)	0	L	0.0
	3	COMPRESSOR	0	L	0.0
	1	BIOLOGIC REFINERY UNIT	0	L	0.0
	1	CHEMICAL REFINERY UNIT	0	L	0.0
28. 41. 33	1	HYDRAULIC PRESS (300 TONS)	123	L	0.0
28. 41. 32	1	AIR GRASPING GUILLOTINE SHEARS 1 M	12	L	0.0
28. 22. 14	1	PORTABLE CRANE 5 TONS	50	L	0.0

Approved by TOBB on 28.03.2016 with number 6561. Valid until 28.03.2018.



28. 41. 32	1	COMBINED SHEARS	15	L	0.0
28. 41. 33	1	HYDRAULIC PRESS 30 TONS	31	L	0.0
	1	CHARPY IMPACT TESTING DEVICE	0	L	0.0
	1	SAMPLE NOTCHING DEVICE	0	L	0.0
	1	LOW TEMPERATURE TESTING DEVICE	0	L	0.0

GALVANIZING SECTION:

Mach. Code	Qty	Description and Tech. Features	Score	Local/Imported	Power (KW)
	1	GALVANIZE TANK (8.40 MT. X1.10 MT.X1.45MT)	0	L	0,0
	4	ACID BATH (9.40 MT. X1.30 MT.X1.48MT)	0	L	0,0
	1	WASTE ACID POOL (9.40 MT. X1.94 MT.X1.48MT)	0	L	0,0
	1	FLUX POOL (9.40 MT. X1.30 MT.X1.48MT)	0	L	0,0
	1	WATER POOL (9.40 MT. X1.30 MT.X1.48MT)	0	L	0,0
	2	COLLING POOL (8.50 MT. X1.23 MT.X1.48MT)	0	L	0,0
	3	MOBILE TRANSPORTER	0	L	0,0
	4	VENTILATION FAN (FOR ZINC AND ACID)	0	L	0,0
	4	NATURAL GAS BURNER	0	L	0,0
	2	VENTILATION FAN (FUEL)	0	L	0,0
	1	INDUSTRIAL TYPE INFLUX REGENERATION SYSTEM	0	L	0,0

Total: 2918

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TABLE : II ANNUAL MANUFACTURING CAPACITY

Material Code	Type- Feature Commercial and Technical Name	Amount	Unit
25.11.22.00.00	ENERGY TRASMISSION LINE POLES, GSM, TV AND RADIOLINK ANTENNA POLES, POLYGON AND ILLUMINATION POLES AND STEEL CONSTRUCTION	14,844,000	Kilogram
25.61.11.30.00	HOT DIP GALVANIZING WORKS	7,680,000	Kilogram



TABLE: III CALCULATION OF CAPACITY (Reason for Issue: Renewal)

Upon the application of the above-named company, the workplace was visited on 25.03.2016 and the matters given below were found out. The calculations have been made over 8 hours per day 300 days per year. Taylorism has been applied on the benches on which mass production is ongoing.

Manufacturing of energy transmission lines and GSM antenna, polygon and illumination poles (22 workers):

The stapling and cutting processes on the angle trims in sizes of 140 x 140 x 13 mm are carried out in 1 FICEP 166 T NT CNC Machine. The stapling and cutting processes of a 12 meter angle trim lasts for 585 seconds and 1 meter angle trim in sizes of 140 x 140 x 13 equals 27,5 kg.

$$3600 \times 12 \times 27.5 \times 8 \times 300 \times 0,80 = 3899 \text{ tons / year}$$

$$\frac{585}{1000}$$

The stapling and cutting processes on the angle trims in sizes of 180 x 180 x 16 mm are carried out in 1 FICEP 16.36 NT CNC Machine. The stapling and cutting processes of a 6 meter angle trim lasts for 900 seconds and 1 meter angle trim in sizes of 180 x 180 x 16 equals 43,5 kg.

$$3600 \times 6 \times 43.5 \times 8 \times 300 \times 0,80 = 2004 \text{ tons / year}$$

$$\frac{900}{1000}$$

The stapling and cutting processes on the angle trims in sizes of 100 x 100 x 10 mm are carried out in 1 FICEP 13.34 NT and 1 FICEP HP 16 T6 CNC Machines. The stapling and cutting processes of a 6 meters angle trim lasts for 900 seconds and 1 meter angle trim in sizes of 100 x 100 x 10 equals 15,1 kg.

$$2 \times \frac{3600}{900} \times 6 \times \frac{15,1}{1000} \times 8 \times 300 \times 0,80 = 1392 \text{ tons / year}$$

The stapling and cutting processes on the angle trims in sizes of 150 x 150 x 14 mm are carried out in 1 FICEP RAPID 25 T CNC Machine. The stapling and cutting processes of a 12 meters angle trim lasts for 20 minutes (weight 31.6 kg/m).

$$60/20 \times 12 \times 8 \times 300 \times 0.80 \times 31.6 / 1000 = 2184 \text{ tons/year}$$



The stapling and cutting processes on the angle trims in sizes of 60 x 60 x 6 mm are carried out in 1 FICEP HP 12 T4 CNC Machine. The stapling and cutting processes of a 6 meters angle trim lasts for 15 minutes (weight 5.42 kg/m).

$$60/15 \times 6 \text{ m} \times 8 \times 300 \times 0.80 \times 5.42 / 1000 = 250 \text{ tons/year}$$

Angle trims in sizes 40 x 40 x 4 mm are processed in 3 universal cutting, drilling and stapling machine. The processing of a 6 meters angle trim lasts for 9 minutes (weight 2.42 kg).

$$3 \times 6 \text{ m} \times 60 \times 300 \times 8 \times 2.42 \times 0.70 = 488 \text{ tons/year}$$

$$\frac{\text{---}}{9} \quad \frac{\text{---}}{1000}$$

Required Materials :

Various Angle Trims : 10,217 tons / year

The calculation of the capacity principles of the bench apart from the serial manufacturing stands has been made according to the scores defined within the book of principles named " Steel Construction Manufacturing."

Bench score : 2918
Worker score : 50 x 5 = 250
Machinery & facility score : 2918 x 1.5 = 4377
Workshop Score : 4377 + 250 = 4627 points

Required Materials :

Various Angle Trims : 4165 tons / year
Var. Sheet : 231 tons / year
Var. Profiles (I, U, L, T) : 231 tons / year

Inert gas welding wire : 16 x 10 x 300 = 48.000 kg / year
Electrode calculation : 5 x 20.000 = 100.000 Pcs / year

Total production : 3899 + 2004 + 1392 + 2184 + 250 + 488 + 4627 = 14,844 tons / year

Galvanizing capacity : In the current galvanizing tank, 1200 kg material is galvanized in 1 dip and the process is completed in 18 minutes.

$$60/18 \times 8 \times 300 \times 0.80 \times 1.2 = 7680 \text{ tons / year;}$$



Zinc calculation : $7,680 \times 90$
----- = 691 tons / year
1000

Flux : $7,680 \times 0.0014 = 11$ tons / year
Lead : $7,680 \times 0.0008 = 6$ tons / year

There are 4 acid baths in the facility:

Total bath capacity: $4 \times 9,40 \times 1,30 \times 1,48 \times 0,75 = 543$ m3
 $54.3 \times 1155 = 63$ tons

The pools are discharged and re-filled 6 times a year.

73 % of the pool is composed of hydrochloric acid and 27% of water.

$63 \times 6 \times 0,73 \times 0,85 = 235$ tons / year hydrochloric acid.

Natural gas is used in the galvanize furnace and the actual consumption rate was defined as 455.000 m3 / year.

These and other required materials are further shown in Table IV.



TABLE : IV ANNUAL CONSUMPTION CAPACITY

Material Code	Type- Feature Technical Name	Unit	Amount	In written
24. 10. 71	Various Angle Trims (profile)	Ton	14,382	Fourteen Thousand Three Hundred and Eighty-Two
24. 10. 36	Various Sheets	Ton	231	Two Hundred and Thirty-One
24. 10. 71	Various Profiles (I, U, L, T)	Ton	231	Two Hundred and Thirty-One
	Electrode	Pcs	100,000	One Hundred Thousand
	Inert Gas Welding Wire	Ton	48	Forty-Eight
24. 43. 12	Zinc	Ton	691	Six Hundred Ninety One
	Flux	Ton	11	Eleven
	Lead	Ton	6	Six
	Hydrochloric Acid	Ton	235	Two Hundred Thirty Five
	Natural Gas	Cubic meter	455.000	Four Hundred Fifty Five Thousand
	Connection elements (bolt, nut, spacer, anchorage)	Ton	1.100	One Thousand and One Hundred



This capacity report herein includes the information found out by the expertise staff of the concerned chamber and composed of 9 pages and prevails the capacity report approved on 27.03.2013 by TOBB (Turkish Union of Chambers and Exchange Commodities) with no 6487.

Examined by:
MÜJDAT BAYRAMOĞLU
Metallurgical Engineer
Signed

CHAMBER APPROVAL SIGNED & SEALED 28 MARCH 2016 CANER HASTAS Director of Document Services	APPROVAL OF TURKISH UNION OF CHAMBERS AND EXCHANGE COMMODITIES SIGNED & SEALED M. ALİ BAYRAM Director of Industry	TURKISH UNION OF CHAMBERS AND EXCHANGE COMMODITIES DATE & NO 28.03.2016 * 006561 This capacity report is valid until the "Expiry Date" written on 1 st Page.
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[Translator's Note: Each page of the original report bears seal of the chamber and report date as 28.03.2016]

