ELSEWEDY CABLES

AUTOMOTIVE WIRES AND CABLES

FOR WIRING HARNESS

INDEX

ELSEWEDY ELECTRIC

Integrated Energy Solutions

A global leader that has evolved from a local manufacturer of electrical products into an integrated infrastructure solutions provider; with over 17,000 employees and more than USD 3.8 billion market capitalization. We Operate in five key business sectors: Wire, Cables & Accessories, Electrical Products, Engineering & Construction, Digital Solutions, and Infrastructure Investments. With a strong presence in 19 different countries, 31 production facilities spread across African and Asian countries including Egypt, Algeria, KSA, Qatar, Indonesia, Pakistan, and Tanzania. We export a wide range of high-end products to over 110 countries worldwide. At the heart of our approach is an all-in-one integrated Engineering, Procurement & Construction (EPC) service, enabling us to deliver the most complex turnkey projects on time and with the highest efficiency.

A vital part of our mission is ensuring that the communities where we operate develop and flourish. We work to facilitate the global transition toward a sustainable energy future, whereby we established green energy projects and smart cities across Africa, the Middle East, and Eastern Europe. In alignment with our 2030 sustainability strategy, we aim to extend and enhance our positive impact, provide energy services to a growing customer base, and drive decarbonization, digitalization, and sustainable transition in Egypt and beyond.

Group strategy and market opportunities

FINANCIAL STRENGTH | PRODUCT DIVERSITY | SECTOR EXPERTISE | GEAOGRAPHICAL REACH

Our growth has been driven by hiring talents and empowering businesses and communities where we operate. We enable customers to digitize and meet the challenges of an ever-changing world.

Our extensive range of digital solutions allows them to become smarter, faster, and more agile. We are committed to doing our best to serve our customers while caring for the environment. We aim to use our knowledge of our environmental impact to better develop more sustainable business scenarios and evaluate our future policies.

- **3.8 Billion USD** Revenue annually
- **4K+ KiloMeters** Overhead Transmission Lines
- **95+ Substations** Indoor & Outdoor Substations
- **23 Giga Watts** Total number of delivered power
- **25M Square Meters** Sustainable Industral Communities
- **23K+ KiloMeters** Distribution Networks

Corporate Business lines

- Wire,Cable and Accessories
- Electrical Products
- Engineering & Construction
- Digital Solutions
- Infrastructure Investments

Wire, Cable & Accessories

With over 40 years of experience in the manufacturing industry, Elsewedy Electric's product portfolio provides a comprehensive range of wires, cables, and accessories that comply with international standards and are recognized locally and globally. We pride ourselves on our ability to provide the most reliable, cost-effective, high-quality products and innovative solutions for our customers. With a reach to more than 100 countries and an annual production capacity of approximately 350,000 tons, we offer power, special and telecom cables, winding wires, OHTL & OPGW, steel products, insulators, cable accessories, explosion-proof equipment, and plastics.

Global Presence

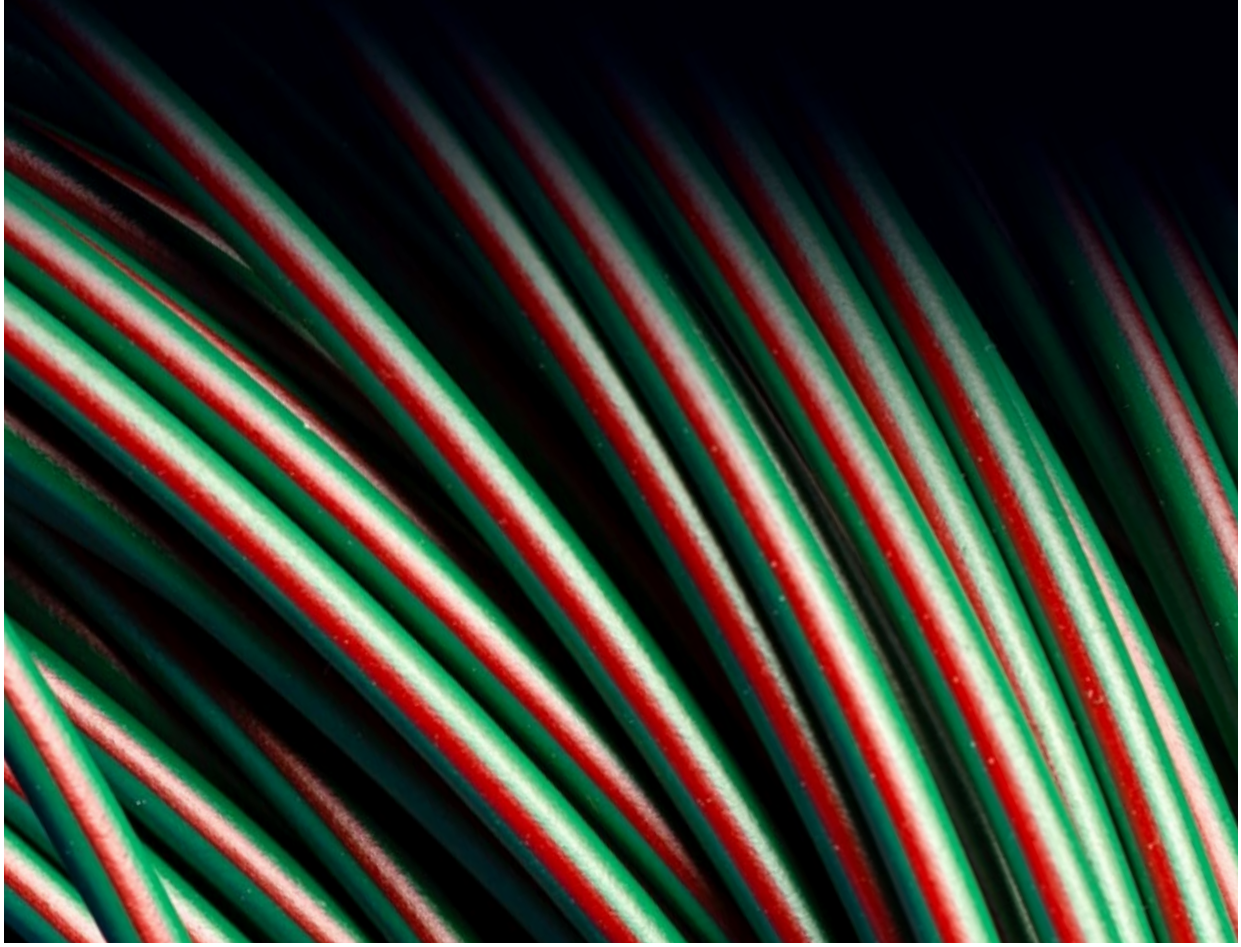
Globally **31** PRODUCTION FACILITIES **19** OPERATION COUNTRIES **110** EXPORTING COUNTRIES

Wire, Cables & Accessories · Electrical Products · Meters · Transformers · Telecommunication · Renewable energy · Projects & Development · Export

Our **Special Cables Factory**

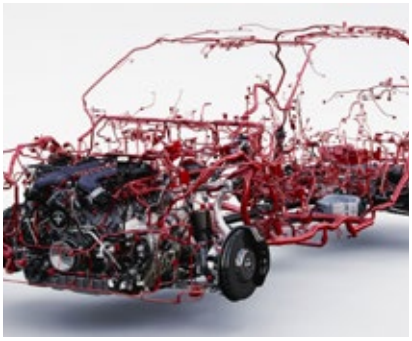
SPECIAL CABLES FACTORY

We are a leading global manufacturer of special cables that range from fire resistant cables, instrumentation, control cables, fire alarm cables, to coaxial cables, LAN wires, and fiber optic cables. Our production facilities are some of the most advanced in the region covering a total space of over 34,000 m2, with an annual production capacity of over 38,000 tons. The production life cycle is controlled by more than 980 dedicated employees that deliver outstanding performance even under the toughest conditions.



Applications

Our wires are used in manufacturing electrical wiring harnesses for automotive and home appliances, which are used in starting, charging, lighting, signaling and instrument panels.



Power Applications:
Multi-core automotive cables with sheath, shielded and unshielded. Lighting and wiring systems, electrical installation wiring, engine compartment etc.

Comfort Applications:
Roof, seat, heating, ventilation & climate control systems, park assistance, consumer electronics etc.

Control Applications:
Sensors for rain, weight and occupant recognition, fill level, lambda probe, applications with capacity and inductivity requirements etc.

Safety Applications:
Multi-core automotive cables for airbag, belt, pre-crash, collision avoidance and closing systems, clamping protections, chassis safety, distance controllers etc.

Truck Applications:
Muti-core automotive cables in straight and coiled version for connection cable between tractor and trailer / semi-trailer, lighting and wiring systems with ADR approval.

Why **Elsewedy Electric**

1. Quality:

We pride ourselves in providing premium quality cables that hold multiple quality certifications. We are the only lab in Egypt who's accredited by ISO 17025. , in addition each of our different cable types are also approved by one or more reputable international third party bodies, these certifications include : UL, KEMA, VDE, BASEC, LPCB, BV, IMQ and more.

2. Customization & flexibility of designs:

Our R&D center offers our customers a diversified product customization portfolio. that covers design, manufacturing or special product specifications to help suit special environmental conditions. We are the only cables manufacturer in the Middle East with the capability to manufacture hybrid cables that include LV, Control, Signal and Fiber optic elements in one composite product.

3. Safety and assurance:

Elsewedy Cables is always striving to offer products with the highest safety standards, we prioritize the safety specifications of cables as much as their functional and performance specifications. We are continuously researching new safety and security measures to integrate in our products assuring the utmost safety with the finest quality.

4. Deep experience:

Elsewedy Cables boasts more than 40 years of experience in cable production, we have expanded rapidly over the years to different countries and continents. Our strong customer base and leading market position is testament of our capabilities to manufacture and maintain high quality products.

5. One stop shop:

We are a one stop shop for all your electrical and infrastructure needs. Our 5 business lines cover everything from cabling, to electrical products, engineering and infrastructure, smart infrastructure , and infrastructure investments. We leverage our deep domain knowledge and latest technology to provide solutions for any customer challenges.

Why **Elsewedy Electric**

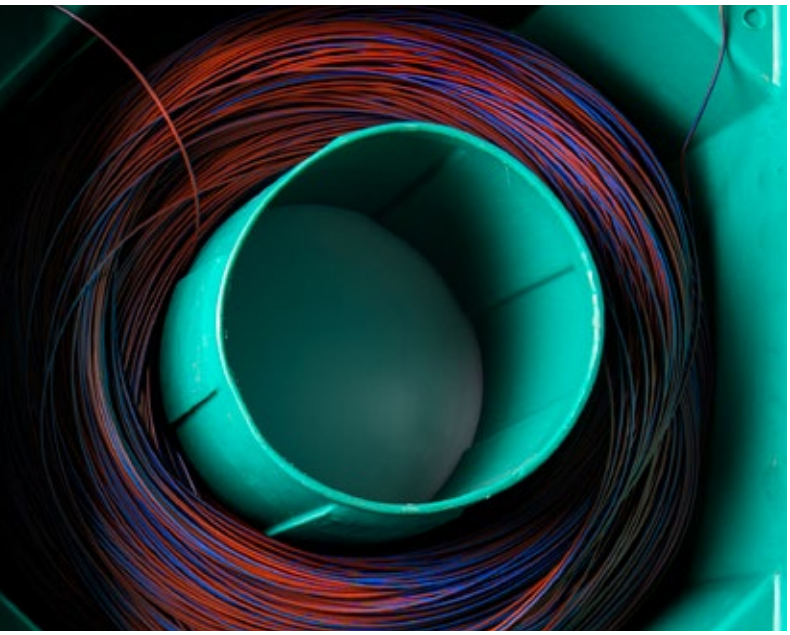
80%
market share in Egypt

270,000km
Production / year

2,026 tons
Production / year

7. Agility that enables cross border expansion:

Agility has helped us expand geographically and adapt our products and solutions to the different customer needs, allowing us to always put our customer first.

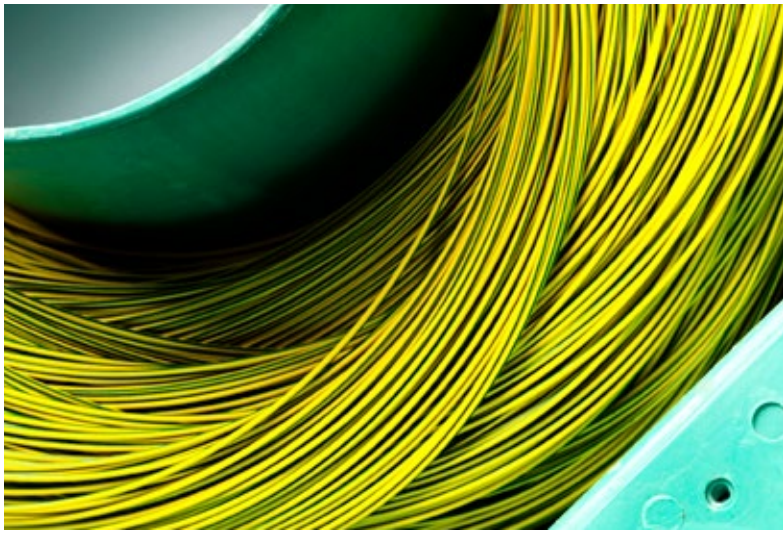


8. Stellar reputation :

We are recognized as the market leader and the top cable brand in Egypt and a well-recognized brand, GCC and Europe. Our clients include LEONI, THALES, DEWA, ABB, ORASCOM, SIEMENS, STC and more.

9. Support & customer care:

Since day one our aim was and still is to offer exceptional customer service locally and globally by delivering quality products, services and innovative solutions. Our experienced team can provide technical support to answer all customers' queries and ensures the right cable is chosen depending on its application.



Customer **Loyalty & Satisfaction**

Our exceptional customer service and high quality products and services has strengthened the loyalty of our large local and global customer base.

+20 years LEONI

+13 years SUMITOMO ELECTRIC

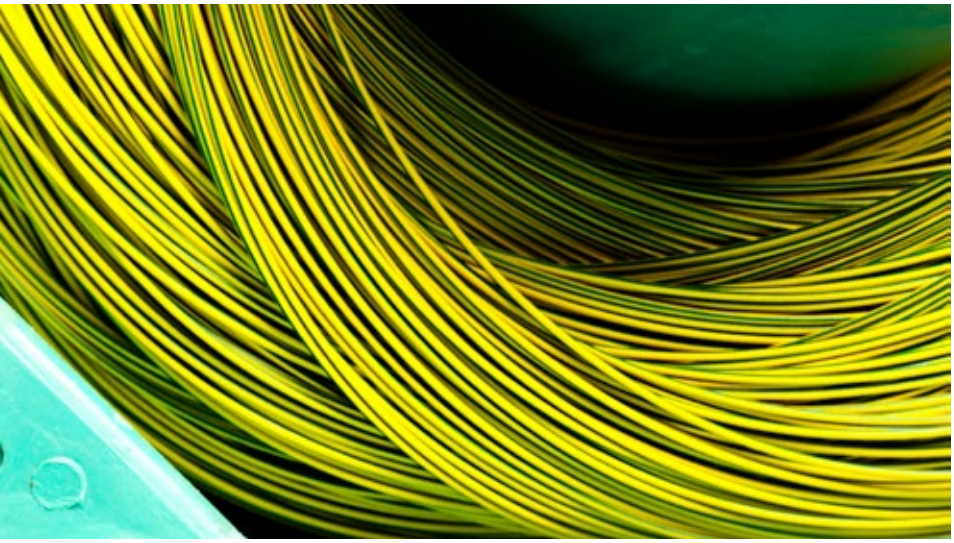
+12 years MCV

+12 years idaco

+12 years ELARABY

Packaging:

We use carton boxes, plastic boxes, plastic spools and air coil in our products' packaging. We always aim to use recyclable material that ensures sustainability and protects our environment. Using recyclable packaging helps reduce the negative impact on our ecosystem by reducing air and water pollution, and conserving our natural resources.



PVC INSULATION BASED ON ISO 6722

Cables Structure

Conductor Plain / tinned annealed copper

Insulation PVC (polyvinyl chloride)
based on ISO 6722 class A

Color code Color coded with or without stripes upon request

Temperature rating - 40˚C up to + 85˚C

Packing Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Nominal Insulation Thickness (mm)	Maximum Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm2)	Nominal No. of wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km)			
AU001001	0.5	16 x 0.21	37.1	0.6	2.3	9
AU001002	0.75	24 x 0.21	24.7	0.6	2.5	12
AU001003	1	32 x 0.21	18.5	0.6	2.7	15
AU001004	1.5	30 x 0.26	12.7	0.6	3.0	20
AU001005	2	28 x 0.31	9.42	0.6	3.3	26
AU001006	2.5	50 x 0.26	7.6	0.7	3.6	32
AU001007	3	44 x 0.31	6.15	0.7	4.1	37
AU001008	4	56 x 0.31	4.71	0.8	4.4	49
AU001009	6	84 x 0.31	3.14	0.8	5.0	68

Notes: Other Automotive wires types can be provided on specific request.
The above data are approximate and subjected to normal manufacturing tolerance.

HEAT - RESISTANT PVC INSULATION BASED ON ISO 6722

Cables Structure

Conductor Plain / tinned annealed copper
Insulation Heat resistant PVC (polyvinyl chloride) based on ISO 6722 class B.

Color code Color coded with or without stripes upon request

Temperature rating - 40°C up to +100°C

Packing Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Nominal Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/ Km)
	Nominal Cross sectional area (mm2)	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km)			
AU001010	0.5	16 x 0.21	37.1	0.6	2.3	9
AU001011	0.75	24 x 0.21	24.7	0.6	2.5	11
AU001012	1	32 x 0.21	18.5	0.6	2.7	14
AU001013	1.5	30 x 0.26	12.7	0.6	3.0	19
AU001014	2.5	50 x 0.26	7.6	0.7	3.6	31
AU001015	4	56 x 0.31	4.71	0.8	4.4	49
AU001016	6	84 x 0.31	3.14	0.8	5.0	68

Notes: Other Automotive wires types can be provided on specific request.
The above data are approximate and subjected to normal manufacturing tolerance.

HEAT – PRESSURE RESISTANT PVC INSULATION BASED ON ISO 6722

Cables Structure

Conductor	Plain / tinned annealed copper
Insulation	Heat resistant PVC (polyvinyl chloride) based on ISO 6722 class C. (Hot pressure resistance test at 120°C)
Color code	Color coded with or without stripes upon request
Temperature rating	- 40°C up to + 120°C
Packing	Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Minimum Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm2)	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km)			
AU001027	0.35	7 x 0.26	52	0.2	1.3	4.5
AU001028	2.5	19 x 0.19	37.1	0.22	1.6	6.6
AU001029	0.75	19 x 0.23	24.7	0.24	1.9	9
AU001030	1	19 x 0.26	18.5	0.24	2.1	11
AU001031	1.5	19 x 0.32	12.7	0.24	2.4	16
AU001032	2	19 x 0.37	9.42	0.24	2.6	22.5
AU001033	2.5	19 x 0.41	7.6	0.28	3.0	26

Notes: Other Automotive wires types can be provided on specific request.
The above data are approximate and subjected to normal manufacturing tolerance.

CONCENTRIC CONDUCTORS WITH PVC INSULATION BASED ON DIN 72551

Cables Structure

Conductor	Concentric stranded copper conductor
Insulation	based on DIN 72551, part 6, type A. PVC (polyvinyl chloride) based on DIN 72551, part 5.
Color code	Color coded with or without stripes upon request
Temperature rating	- 40°C up to + 105°C
Packing	Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Minimum Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm2)	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km)			
AU001027	0.35	7 x 0.26	52	0.2	1.3	4.5
AU001028	2.5	19 x 0.19	37.1	0.22	1.6	6.6
AU001029	0.75	19 x 0.23	24.7	0.24	1.9	9
AU001030	1	19 x 0.26	18.5	0.24	2.1	11
AU001031	1.5	19 x 0.32	12.7	0.24	2.4	16
AU001032	2	19 x 0.37	9.42	0.24	2.6	22.5
AU001033	2.5	19 x 0.41	7.6	0.28	3.0	26

Notes: Other Automotive wires types can be provided on specific request.
The above data are approximate and subjected to normal manufacturing tolerance.

PVC THIN INSULATION BASED ON DIN 72551

Cables Structure

Conductor Concentric stranded copper conductor

Insulation based on DIN 72551, part 6, type B.
PVC (polyvinyl chloride) based on DIN 72551, part 5.

Color code Color coded with or without stripes upon request

Temperature rating - 40°C up to + 105°C

Packing Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Minimum Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm2)	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km)			
AU001034	0.35	12 x 0.21	52	0.2	1.4	4.5
AU001035	0.5	16 x 0.21	37.1	0.22	1.6	6.6
AU001036	0.75	24 x 0.21	24.7	0.24	1.9	9.0
AU001037	1	32 x 0.21	18.5	0.24	2.1	11.0
AU001038	1.5	30 x 0.26	12.7	0.24	2.4	16.0
AU001039	2	30 x 0.31	9.31	0.24	2.6	22.5
AU001040	2.5	50 x 0.26	7.6	0.28	3.0	26.0
AU001041	3	45 x 0.31	6.15	0.28	3.2	32.5
AU001042	4	56 x 0.31	4.7	0.32	3.7	42.0
AU001043	6	84 x 0.31	3.1	0.32	4.3	61.0

Notes: Other Automotive wires types can be provided on specific request.
The above data are approximate and subjected to normal manufacturing tolerance.

Certifications

Elsewedy Cables Certificates for ISO 14067 Carbon Footprint

We are the only cables manufacturer in the Middle East to be awarded the TÜV NORD certification for "Calculation & Verification of Carbon Footprints & Carbon Neutrality".

TÜV NORD

ANNEX

to Certificate Registration No. 44 811 191730
TÜV NORD CERT Standard TN-CC 020
"Calculation & Verification of Carbon Footprints & Carbon Neutrality"

Elsewedy Cables
A3 Industrial Zone
10th Ramadan
Al Sharqia, 44629
Egypt

ELSEWEDY CABLES

TÜV NORD CERT GmbH, acting as an independent Certification Body and to a limited level of assurance, can confirm the carbon footprint of the fifteen cables to be as follows:

No	Size (mm)	Voltage	Cable Description	Total emission of 1 meter (kgCO2e)
1	1X25	600 V	Cu/XLPE	19.26
2	1X1.20	8.7/15 (17.5) kV	Cu/XLPE/CWS/PE	126.95
3	1X240	0.6/1 (1.2) kV	Cu/XLPE/PVC	170.54
4	1X240	15/25 (31) kV	Cu/XLPE/CWS/PE	258.20
5	1X630	15/25 (31) kV	Al/XLPE/CWS/PE	289.06
6	1X1X185	8.7/15 (17.5) kV	Al/XLPE/CWS/PE	362.62
7	1X3X240	20/35 (38) kV	Al/XLPE/CWS/PE	538.84
8	1X25	0.6/1 (1.2) kV	Al/XLPE/PE	32.69
9	1X150	0.6/1 (1.2) kV	Cu/XLPE/PVC	109.57
10	1X240	12/20 (24) kV	Al/XLPE/LAT/PE	125.08
11	1X400	18/30 (36) kV	Al/XLPE/LAT/PO	235.099
12	1X400	18/30 (36) kV	Al/XLPE/LAT/PO	191.55
13	50	-------	Hard Drawn Copper Conductor	32.27
14	95	-------	Hard Drawn Copper Conductor	61.03
15	1X400	7.6/13.2 (15.8) kV	Al/XLPE/CWS/PVC	231.43

End of the list

Essen, 2020-06-29

Certification Body
TÜV NORD CERT GmbH

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.com

Page 1 of 1

TÜV NORD

CERTIFICATE

TÜV NORD CERT Standard TN-CC 020
"Calculation & Verification of Carbon Footprints & Carbon Neutrality"

Evidence of conformity with the above standard has been furnished and is certified in accordance with TÜV NORD CERT procedures for

Elsewedy Cables
A3 Industrial Zone
10th Ramadan
Al Sharqia, 44629
Egypt

ELSEWEDY CABLES

The calculation of carbon footprint encompasses the emission from manufacture of the cables in terms of the raw materials, upstream and downstream transportation and manufacturing processes

Based on the performed assessment it can be stated that the calculation meets the requirements of the standard ISO 14067, which is the basis of the calculation and TN-CC 020, which has been used for the certification standard.

Certificate Registration No. 44 811 191730
Audit Report No. 3525 4752

Reporting Period
Valid from 2018-01-01
Valid until 2018-12-31

Certification body
TÜV NORD CERT GmbH

Essen, 2020-06-29

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.com

Sustainability

This study aims to layout and calculate the carbon footprint in the cables factory:

Power related emissions

These emissions are linked to purchased electricity the corporate used, as well as its diesel and petrol consumption.

a) Diesel

The United Industries consumed 144,000 liters of diesel annually. Diesel is a direct emission accounted for under scope 1. This amount was used in forklifts. The results are shown in Table 12.

Table 12: Direct Emissions - scope 1 Diesel

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Diesel	144,000	l/year	384,480
2018		144,000		384,480
2019		144,000		384,480

b) Natural Gas

United Industries consumed 715,476 m^3 of natural gas in 2017, 765,662 m3 in 2018, and 451,714 m3 in 2019. Natural as is direct emission accounted for under scope 1. This amount used in chillier.
The results are shown in Table 13.

Table 13: Direct Emissions - scope 1 Gas

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Gas	715,476	m^3/year	1,455,707
2018		765,662		1,557,816
2019		451,714		919,057

c) Company owned cars

United Industries owned cars travelled 683,309 km in 2017, 579,000 km in 2018, and 1,889,287 km in 2019. The company-owned car emissions are a direct emission accounted for under scope 1. The results are shown in Table 14.

Table 14: Direct Emissions - scope 1 company-owned cars

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Company owned cars (Petrol)	683,309	km/year	136,887
2018		579,000		115,991
2019		1,889,287		134,522

d) Electricity

Electricity is an indirect emission under scope 2. United Industries used electricity from the grid as an energy source for production, lighting, cooling, etc.
In 2017 United Industries consumed 25,954,800 kWh, 26,025,600kwh in 2018, and 23,803,200 kWh in 2019. The results are shown in Table 15.

Table 15: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	$KgCO_2e$
2017	Electricity	25,954,800	kWh/year	12,977,400
2018		26,025,600		13,012,800
2019		23,803,200		11,901,600

Travel related emissions

These emissions consist of the corporate's employee's daily travel, as well as their business travel.

a) Business Travel

In 2017 United Industries' total number of flights was 28. All flights were short-haul (flights up to 3,700km), and 19,200 km were business travel – no flights. In 2018 the total number of flights was 58. Fifty-six flights were short-haul, and two flights were long-haul and 29,690 km were business travel – no flights. In 2019 the total number of fights was 62, all were short-haul, and 72,414 km were business travel – no flights.
The results are shown in Table 16. Business travel is indirect emission under scope 3

Table 16: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Business travel	93,400	km/year	16,273
2018		177,390		31,415
2019		226,714		40,491

b) Commuting related emissions

The total United Industries staff count was 920 employees in 2017, 926 in 2018, and 960 employees in 2019. The staff commuting emission are shown in Table 17. Commuting emissions are indirect emissions under scope 3

Table 17: Indirect Emissions - scope 3 Office staff commuting emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Staff commuting	1,723,600	km/year	178,234
2018		1,522,512		154,611
2019		1,601,271		162,609

Emissions due to paper consumption

In 2017 United Industries used 750,000 sheets. In 2018 the total used sheets was 1,120,000, and in 2019, the total used sheets was 900,000. The emission results are shown in Table 18.

Table 18: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Paper consumption	3,742	kg/year	5,389
2018		5,588		8,047
2019		4,491		6,467

Emissions due to waste management and disposal

Emissions at this section occur through the United Industries waste management and waste disposal process. The total amount of waste in 2017 was 1,409 tons, 1,448 tons in 2018, and 1,449 tons in 2019. The emission results are shown in Table 19.

Table 19: waste management and disposal

Scope 3		Consumption	UNIT
2017	Waste management & transport	63,542	$KgCO_2e$
2018		38,825	
2019		39,117	

Sustainability

Results United Industries Egypt

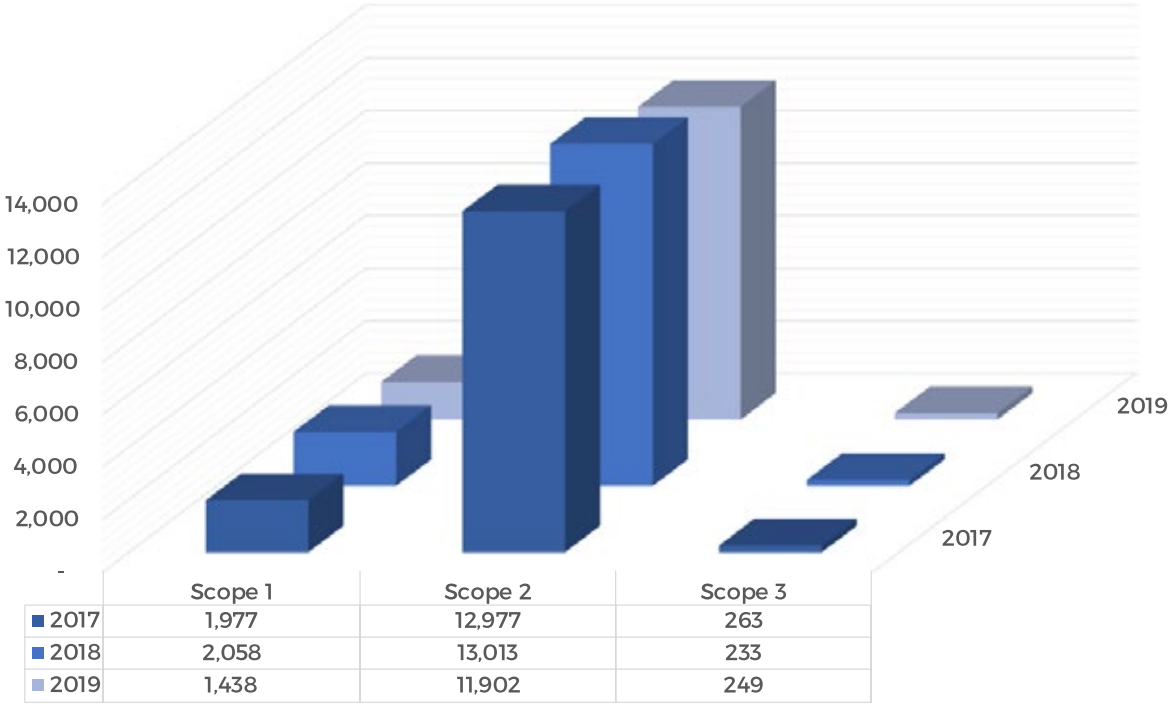
The total carbon footprint for United Industries amounts to 15,218 tons of CO2e in 2017, 15,304 tons of CO2e in 2018, and 13,832 tons of CO2e in 2019.

a) Emissions per scope

Table 20: Emissions per scope

	2017	2018	2019
Scope	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Scope 1	1,977	2,058	1,438
Scope 2	12,977	13,013	11,902
Scope 3	263	233	249
Total	**15,218**	**15,304**	**13,588**

Graphic 6: Emissions per scope



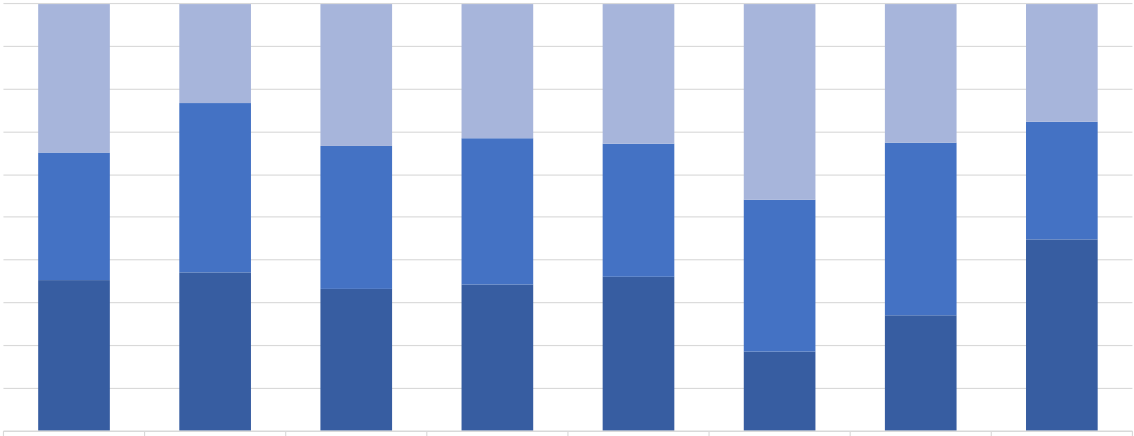
b) Emission per category

Table 21: Emissions per scope

	2017	**2018**	**2019**
Category	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Company owned cars	136.9	116.0	134.5
Gas	1,455.7	1,557.8	919.06
Diesel	384.5	384.5	384.48
Electricity	12,977.4	13,012.8	11,901.60
Commuting	178.2	154.6	162.61

	2017	2018	2019
Buiness travel	16.3	31.4	40.49
Paper consumption	5.4	8.0	6.47
Waste	63.5	38.8	39.12
TOTAL	**15,218**	**15,304**	**13,588**

Graphic 7: Emissions per category



	Company owned cars	Gas	Diesel	Electricity	Commuting	Buiness travel	Paper consumption	Waste
2019	134.5	919.1	384.5	11,901.6	162.6	40.5	6.5	39.1
2018	116.0	1,557.8	384.5	13,012.8	154.6	31.4	8.0	38.8
2017	136.9	1,455.7	384.5	12,977.4	178.2	16.3	5.4	63.5

C) Emission per employee

Table 22: Emissions per employee

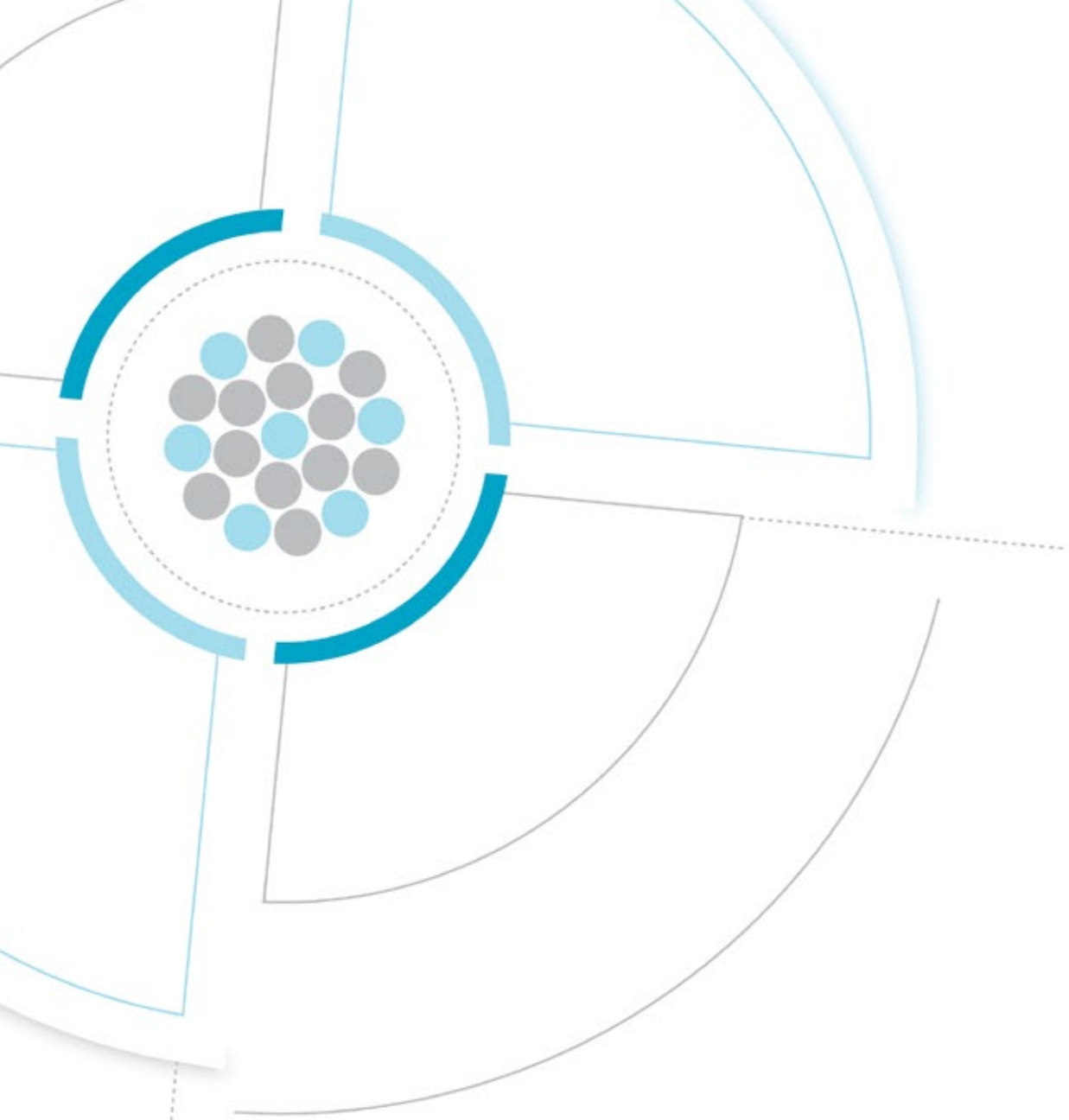
Per employee	Emissions in tCO2e	tCO2e
2017	15,218	16.54
2018	15,304	16.53
2019	13,588	14.15

D) Emission per m ²

Table 23: Emissions per m2

Per m2 (office space)	Emissions in tCO2e	tCO2e
2017	15,218	0.35
2018	15,304	0.22
2019	13,588	0.19

Our Partners **in Success**



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