

Low Carbon And New Energy Solutions

-Anton NE



Organizational structure

- Anton established in 1999, is a leading integrated oilfield technology service company, forming a market network of comprehensive coverage. With its business in more than 30 countries, China, the Middle East, Africa, Central Asia, Southeast Asia and Latin America, Anton has established a rapid response system for global service support.
 - Anton new energy is committed to focusing on oil field and providing integrated service solutions of low-carbon and new energy. Its main businesses include photovoltaic power generation, geothermal well development and utilization, natural gas recovery, CCUS, low-carbon business consulting and carbon asset management.



Anton new energy founded in November 2021, is a wholly-owned subsidiary of Anton, the world's leading integrated oilfield technology service company. Anton new energy gives full play to its rich experience and advantages in traditional energy development, has established a professional technical team, focus on new business areas and innovation of low-carbon and new energy related technical services.







Five advantages





Service mode









- **1**、 **PV** power generation
- 2、Hydrogen energy
- 3、 Development and utilization of geothermal well
- 4、Gas recovery
- 5、Carbon capture, utilization and storage
- **6** Low carbon business consulting and carbon asset management





Clean energy is the best way to reduce the cost of electricity and curb carbon emissions

> photovoltaic power generation has attracted the most attention. 1MW photovoltaic power station is equivalent to:

Annual power generation	>1 million kwh	
Reduce CO ₂	> 1000 tons	
Save coal	> 327 tons	
Reduce dust	> 3 tons	
Afforestation	>78 hectares	



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Anton new energy provides integrated solutions for photovoltaic power stations such as ground power stations, distributed power stations, off microgrid power stations, power station operation and maintenance, as well as agent sales of photovoltaic accessories such as modules, inverters and supports



- Drilling rig equipment, pumping unit, water injection pump and other high-power oil production equipment
- ✓ Oil tank, pipeline heating, combined station
- ✓ Plant, workshop and office building
- ✓ Barracks and surrounding living areas

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Intelligent photovoltaic inverter



1) Maximum efficiency > 99% 2) intelligent string breaking

3) Super quiet design

4.95%

+6.50%

30

25

4) Dustproof and waterproof grade of **IP66**

5) High precision string detection 6) Effectively reduce the influence of string mismatch

7) AC / DC lightning protection

8) Integrated machine design technology,

30% lighter than similar products

9) Support IV diagnosis

Ground installation system



The connection mode is divided into welding type and assembly type. The long service life of solar powered support is guaranteed by comprehensive utilization of aluminum alloy anodizing, ultra thick hot dip galvanizing, stainless steel, anti UV aging and other technologies

5

10

15

20

80.7%

1

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Provide one-stop photovoltaic power station services

exchanging and consulting

Professional teams exchange photovoltaic power generation system knowledge and calculate energy-saving benefits free of charge

² and design

Field survey and provide customized design scheme according to site structure and power generation demand

Procurement ³ and transportation

Customize the materials and hardware that meet the design scheme standards. Ensure safe transportation and distribution

Operation and maintenance

Intelligent, information-based and professional photovoltaic operation and maintenance services can respond and solve problems quickly

Acceptance of grid connection

Agent for application procedures to help grid connection acceptance and commissioning

⁴ Engineering installation

Customize the installation scheme, strictly control the construction and build a high-quality project



Project case :
 Distributed photovoltaic project
 of Jidong machinery plant



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□ Integrated green hydrogen service

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Electrolytic water hydrogen production unit

- New energy such as solar energy and wind energy can be used to generate electricity and hydrogen without pollution emission
- High purity of hydrogen production, up to 99.99999%

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Natural gas reforming hydrogen production unit

- Mature technology, short process, low investment, stable production capacity and environment-friendly
- Skid mounted, customized small-scale hydrogen production unit for oilfield natural gas / associated gas

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Complete hydrogen turbine powergeneration technology series and capacity

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The introduction of Italian novalt gas turbine technology can realize mixed hydrogen combustion with different ratios, up to 100% hydrogen combustion

□ More application scenarios :

Hydrogenation station Fuel cell Energy storage Industrial application Gas sales

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Jumeirah Lake Tower City: Dubai, United Arab Emirates Post Code: 390895 Unit No 1901 Swiss Tower Cluster Y, Junicieth Loke Towe City: Dubai, United Arab Emirates Post Code: 390895 IADC 体系认证证书 has been independently assessed and is compliant has been independently assessed and is compliant has been independently assessed and is compliant with the requirements of ≝ ≝ ま 安东石油技术(集团)有限公司 with the requirements of with the mouirements of ISO 14001:2015 安东右湖技术集制)有限公司 8. кумпольности 9. кум ISO 45001:2018 ISO 9001:2015 This Certificate is applicable to the following product or service ranges This Certificate is applicable to the following product or service ranges This Certificate is applicable to the following product or service ranges: This Conflictate is applicable to the following predicts or service ranges: hower, and other and a Gar sind networks will finding and Q. Kanara (E. Bevinguez Alexed, Roging W. K. Stear (G. Steff Signitzan, Marsel, C. Bella, Marsel, Sanger, Stear (S. 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Q2-0191 ~~~~L REGISTRATION NO. 01-3663 **77** ZJQG ZJQG ZJQC **Certificate of Registration Certificate of Registration** 中经私推 2007、164035210580 中经认证 中经认证 清新寺: 644198)126588 The American Petroleum institute certifies that the quality menanement system of The American Periodum instruct centrics liter the quality heregoment system of 注重号: 844D8C1158 质量管理体系认证证书 环境管理体系认证证书 职业健康安全管理体系 ANTON OILFIELD SERVICES DIRCC Unit No 1901 Swiss Tower Cluster Y, Jumeirah Lake Tower City: Dubai, United Arab Emirates ANTON OILEIELD SERVICES DMCC Unit No 1901 Swiss Tower Cluster Y, Jumeirah Lake Tower City: Dubai, United Arab Emirates 认证证书 安东石油技术(集团)有限公司 安东石油技术(集团)有限公司 約、特許利用代理。011000年355007XQ 会社支援: 17「201×572日月35 年後後後、北京市場、日本である5644年35 夏雪等後年から合 前、社会自用代码: 001100007355507XQ 注册:34:127 1001×开关由月3号 市核地址:北方市地:11(万克法364本目144号) has been assessed by the American Petroleum Institute and found to be in conformance has been assessed as the American Petrolaum instruction trunding opin points manage with the following 安东石油技术(集团)有限公司 **API Specification Q2** 第一社会保持保持、41100005355005XQ 并且特許。15.1年11日第二7月第三子 当後406、月公市公式区本部法学校可能工艺 **API Specification Q1** 52746246 GB/T 24001-2016/ISO 14001:2015 #c?# GB/T 19001-2016/ISO 9001:2015 标准 Nexa e Alteração e e Alteração e a la termina de la composición de las **** 的法无限教育书 #重要要求全會社員委等會 GB/T 45001-2020/ISO 45001:2018 标准 不能此所不能加工程度(特容等)。结果其大素等(油用量本外 2、生用口程水果等,口度并我之事外,无非无法和优化。果你,并一行 可以不过你,去说是们不能不能不能不是不是不是一个特定工作的工作。 有,不能与特殊无法情况和主要。我们是一个特定工作的工作。 有,我们就是一个时候上,你们不能是实现的不知道。" СИГТ 4901-2020/150 49012020 8774 ВКАЗТТ ПОВОТОТО ВКАЗТТ ПОВОТОТО ВКАЗТТАНИКАТО ВКАЗТАНИКАТО ВКАЗТАНИКАТО ВКАЗТАНИКАТО ВКАЗТАНИКАТОВИСТИСТВИИ ВКАЗТАНИКАТОВИТСЯ ВКАЗТАНИСТИВИТАТОВИТСЯ ВКАЗТАНИКАТОВИТСЯ ВКАЗТАНИСТОНИСТИВИТОВИТСЯ ВКАЗТАНИСНИВОНИТОВИТСЯ ВКАЗТАНИСТОНИСТ Cementing, Stimulation & Pumping Services Instituting Oil Well Class *6* Cement & activities For Littlesch Stadtaver Wells nting, Stimulation & Pumping Ser including Oli Well Class "G" Cement & Additives For Drilling & Workover Wells 4. 在学行行代本教授和学校部分、第4年(18月1日、第一代)(14年 (18年代)) 1月12(11年)(14年代)(14年代) 1月12(11年)(14年代)(14年代) 1月12(11年)(14年代)(14年代)(14年代)(14年代)(14年代) 1月12(11年)(14年代)(14年代)(14年代)(14年代)(14年代)(14年代) 1月12(14年代)(14年()(14年()(14年()(14年()(14年()(14年()(14年()(14年()(14\pm 目標供使使不服务的代表研究性(《新聞教育会由》研究研究 目標供使使不服务的代表研究性) 名論专力目前有完成所擁住水服务的代表研究性力 All approves the promotion's utilization to excluding: AP approves the organization's justification for excluding: (完在成果科士产业社会有限公司) 1月75日大大会(北京、北京、大田大学市地区) 「月75日大大会(北京、北京)、東洋市主学術工大学管理 (二、単位文字道集山汕技大服务考察会司) 名大学市場「「美元大市「村中」、大江大学村中一学学生主力会会) Design and Development No Exclusions Identifies as Applicable Effective Date: JANUARY 23, 2018 Expiration Date: JANUARY 23, 2021 Registered Since: JANUARY 23, 2018 Effective Date: MARCH 12, 2018 Expiration Date: JANUARY 29, 2021 111 1011-144 WSR4 20. #121103 RHL . 42 #0. 1 H. 北京山市村4歳月に山市限公司 営約湯。 てき Registered Since: MARCH 12,2018 ちょを ちょを A TRANSFER AND AND A TRANSFER H TRANSFER AND A TRAN SE. -----ati North and American I will statisfield the AR. 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Equipment capacity: We own and manage 14 drilling rigs, have xj550, xj650, xj750, xj850 and other series of vehicle mounted drilling / workover rigs

- Integrated services for the whole process from construction scheme design to project organization, give full play to the advantages of excellent and fast drilling and low-cost services, and improve project quality and risk control ability
- Provide drilling services and well factory construction services for vertical wells, directional wells and horizontal wells with different well depths from 2,000 to 7,000 meters
- Provide various services such as daily cost of drilling engineering, general contracting, drilling rig management and technical support. The market covers major domestic oilfields and the Middle East and Africa, with an annual footage of 300,000 meters
- The technical service capacity of workover and completion reaches 1,000 wells / year

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Well construction capacity Connecting brine mining wells Delta

The Yellow River Delta salt mine is the deepest, most difficult, ultra-high temperature and high pressure brine mining well known in the world. Anton provides integrated general contracting services include drilling, connection and solution cavity, and completes the of salt mines in the Yellow River construction of mineral salt magnetic navigation connection of well cluster with a vertical depth of 4,020m, phase angle screen completion, keyway solution cavity of well cluster, etc.

- The well cluster runs smoothly and has been successfully delivered to customers, producing about 65,302m³ of brine, including about 9,100 tons of salt
- The depth of mineral salt development of the well group exceeded 4,000 meters, refreshed the world record of salt mine development and filled the technical gap of deep well mineral salt development in the world
- In the early stage of the project, the project department visited more than ten salt chemical enterprises in Sichuan, Chongqing, Hubei, Yulin, Hebei and Shandong, and organized more than ten large-scale discussion meetings on construction scheme

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- Provide complete sets of equipment and operation services for the recovery of oilfield gas, coalbed methane, biogas and scattered gas
- ✓ MRC (mixed refrigeration) process standardization movable integrated skid mounted LNG unit
- ✓ Customized processing scale can meet the processing demand of 10,000 to 2 million m³ / day

CNG

Low temperature liquid storage is the main gas recovery scheme at present. It can be used after gasification, pressure regulation and metering

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• MDEA aqueous solution is used to remove CO_2 from the feed gas in the integrated equipment of pretreatment and purification, and the acid gas is desorbed by depressurization heating after adsorption

• Utility integrated equipment includes instrument air and desalting water system. The split skid design makes the movement and transportation more convenient

MRC liquefaction process is adopted in the integrated liquefaction equipment, which uses mixed refrigerant, exchanges heat with gas in the cold box, adopts two-stage refrigeration gas liquefaction technology with lower energy consumption

The integrated complete set of supporting facilities adopts the domestic advanced DCS automatic control system to form a set of advanced automatic control system integrating safety, production and management, so as to realize the high automation of the device

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After transportation to the site, only four integrated complete sets of equipment need to be connected, which greatly reduces the on-site construction work, shortens the construction period of the device and saves the on-site construction cost, and there is no hot work.

28

4. Compressor installation to maintain production rate and to extend plateau.

All Firm Commitments and Work Commitments has been conducted.

东方智慧 全球分享

Oriental wisdom . Global sharing

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- The carbon dioxide recovery technology combined with adsorption method and organic solution has high recovery purity
- ✓ The whole system is controlled by DCs, which fully adapts to the fluctuation of carbon dioxide content in industrial tail gas, improves the recovery rate and saves energy

The alternative injection with water can be used in a large range, low cost and significant increase of recovery

> It has the advantages of no residue, no water phase, fast flowback and no damage to the reservoir, so it has obvious advantages in environmental protection and reservoir increase

Constr Gas stor reservoirs

Heavy

ecoven

sales

Construction of underground gas storage, or sealed in abandoned gas reservoirs

Enterprise recycling for food processing, agricultural breeding, etc

Carbon capture

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DCS monitoring and automatic control system can realize unattended, greatly reducing the cost of workers and error rate

China Shenhua 100,000 tons/year CCS demonstration project

神华 10 万吨/年 CCS 词	试验项目钻井工程合同	
补充	合同	
业 主:中国神华煤制油化工有限公司	鄂尔多斯煤制油分公司	
住 所:内蒙古鄂尔多斯市伊旗上湾马	家塔	
承包商: 安东石油技术(集团)有限公	- 1 1	
住 所: 北京市朝阳区屏翠西路8号		
签于:		
中国种华度制油化工有限公司 拟在内蒙古鄂尔多所建设10万吨/7 石油技术(集团)有限公司(以下 急天也,底主合同(合同号,SOCL 小一)中未对以下几项变动费用进; 一、专业下套管服务费,经双方协商一 三、费业气管加检测费,经双方协商一 三、测试费用,经双方协商一政,氏标 标准结算,(详见附表八) 因、试力工程费用,经双方协商一政 价格标准结算,(详见附表九) 五、冬季施工保暖费用及结机作业 五、(详见成表十) 六、本补充合同作为原合同的补充 突部分以本补充合同力准; 七、本补充合同一式六份,自双方;	(本页无正文, 为签字页) 明方: 中国神华煤制油化工有段公司 努尔多斯煤制油尔公司 第次多斯煤制油尔公司 強定代表人: 或 投权代表人: 算 投权代表人: 年月日	承包商: 安东石油技术 (集田) 有限公

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Low carbon business consulting and carbon asset management

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To provide customers with comprehensive green low carbon business consulting services and carbon asset management services. We firmly believe that enterprises that integrate low carbon development into their own strategic planning will calmly cope with the test of the national carbon market, solve the problem of carbon constraints, and become beneficiaries, contributors and leaders of green low carbon development

Low carbon business consulting

- Low carbon management system construction formulate carbon asset management system and implementation rules
- Low carbon development planning predicting future carbon emissions and formulating low carbon development strategies

Carbon asset management

- Carbon trusteeship carbon quota, voluntary emission reduction trusteeship and agent sales
- Carbon trading agent for carbon quota trading

Innovation, world, industry and a better future!

Anton new energy will always adhere to the mission of helping others succeed, Build a global low-carbon and new energy technology service platform, Provide low-carbon and new energy integrated service solutions, Innovative development, energy transformation, facing to the future!

A MODEL OF EFFICIENT AND HARMONIOUS DEVELOPMENT FOR BOTH HUMAN AND ENVIRONMENT

THANKS

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