# **HETOP** ENR

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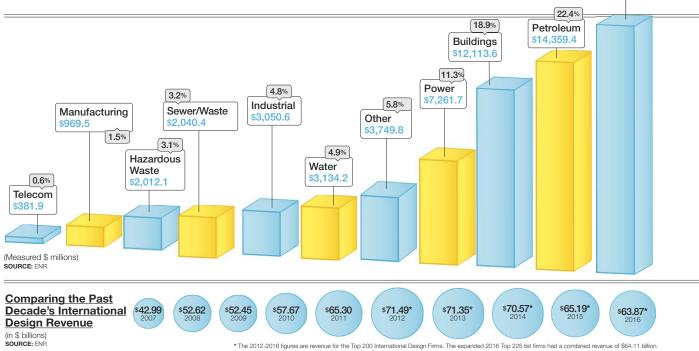
The Top 225 International Design Firms

# **Oil Sector Slows World Market**

While the global petroleum market has slumped, many design firms see demographic changes providing opportunities By Gary J. Tulacz and Peter Reina



# International Market Analysis



The market for international design has traveled a rocky road over the past several years. The slowing growth in China's economy has led to a drop in demand for commodities, the plunge in oil prices has caused deferrals or cancelations in major petroleum projects, and global political and economic unrest has made investments in some regions uncertain. However, shifting demographics and new demands for infrastructure in underdeveloped countries have many international design firms looking to a brightening future.

The uncertainty in the market can be seen in the results of ENR's Top 225 International Design Firms survey. The Top 225 firms generated \$64.11 billion in design revenue in 2016 from projects outside their home countries, down 2.0%, from \$65.43 billion, in 2015 and 9.5%, from \$70.85 billion, in 2014. However, the Top 225 had \$79.30 billion in revenue from domestic projects in 2016, up 12.1%, from \$70.76 billion, in 2015.

On the Top 225 International Design Firms list, firms are ranked based on design revenue from projects outside of their home countries, measuring their presence in international commerce. The ENR Top 150 Global Design Firms list measures total worldwide design revenue, regardless of the project location.

The sagging market for petroleum-related projects is the main culprit in the global revenue downturn. International revenue from the petroleum sector fell 19.0%,



"The car fleet in its totality ... is expected to double in the next 20 years, from around one billion cars today to two billion cars in 2040. This will drive up oil demand."

Andrew Wood, CEO, WorleyParsons to \$14.36 billion, in 2016. International revenue for the sector has now fallen 35.4% from 2014.

23.5%

Transportation

\$15.041.4

Firms in the petroleum sector say large projects are dwindling. "Many projects have been canceled or delayed. The current market is expected to be less active," says Sung Sang-Rok, CEO of South Korea's Hyundai Engineering Co. Ltd.

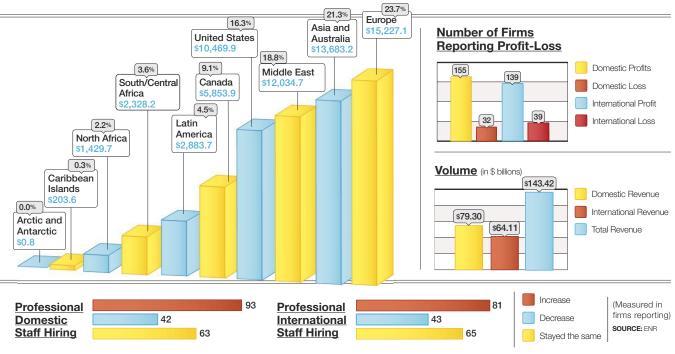
For WorleyParsons, 70% of its revenue comes from hydrocarbon work. However, the sector's few new megaprojects has had only a limited impact on the firm, as much of its work is in smaller projects and in operations and maintenance, says Andrew Wood, CEO of Australia's WorleyParsons. Further, "within hydrocarbons, we can shift between upstream, midstream [or] downstream as capital expenditure shifts its emphasis."

While the demand for oil is not about to dry up, Wood notes that "the car fleet in its totality, however, is expected to double in the next 20 years, from around one billion cars today to around two billion cars in 2040. This will drive up oil demand." He adds, "The increase in demand for car travel for the middle class, we believe, will overpower the effects of improving efficiency and the take up of electric vehicles."

### **Consolidation Continues**

Over the past several years, design firms have been consolidating, leading to the development of an

# International Region Analysis



#9

increasing number of megafirms. This trend is continuing this month with Canada's SNC-Lavalin Group Inc.'s absorption of U.K.-based W.S Atkins Plc, raising the combined workforce to over 50,000. "It's very much business as usual," says Heath Drewett, now Atkins's president. Having achieved the goal of an 8% margin last year, the focus is now on growth, he adds.

In the design sector, "consolidation will definitely continue," says Lars-Peter Søbye, president and CEO of Denmark's COWI AS. COWI seeks to make up for its relatively small size by being in the top three in selected regions and core business lines. Søbye plans to grow sales by 25%, to \$1.1 billion, over the next three years.

"This ... will be a year of consolidation," says Tomas Carlsson, CEO of Sweden's Sweco AB, which acquired Netherlands-based Grontmij in 2015. Yet with a head count of about 16,000 now, "we are looking for acquisitions all over northern Europe," he adds.

With some 6,000 staff worldwide, Paris-based SYSTRA Group is relatively small, but "if we are looking for specific expertise, we can second people from the shareholder," says COO Andrew McNaughton. France's state railroad company, SNCF, and the Paris region masstransit authority, RATP, each owns 42% of the firm.

The acquisition of MWH Global by Canada's Stantec has expanded the firm's reach. "The integration of MWH into the Stantec network continues to demonstrate syner197 of the Top 225 sent in surveys last year.

**46.2%** increased international revenue in 2016.

**53.3%** had lower international revenue in 2016. gies as MWH brings a global footprint in geographies where the combined companies can now offer a more diverse scope of services to local communities," says Alan Krause, Stantec's global operations president.

NKY ARCHITECTS AND

ENGINEERS is managing design and

engineering at 44 sites under the King Abdullah Project 2 in Saudi Arabia.

The trend toward mergers and acquisitions also can be seen in Asia. Surbana Jurong Pvt. Ltd. of Singapore acquired Australia's SMEC in August 2016, expanding its global workforce to 9,800 employees in more than 95 offices across 40 countries.

Surbana Jurong also has launched a series of joint ventures. On May 25, it announced a new joint venture with Safdie Architects, Boston. To be called Safdie Surbana Jurong (SSJ), it will pursue major residential, commercial and institutional projects in Asia, says Wong Heang Fine, group CEO of Surbana Jurong. In March, Surbana Jurong formed a joint venture with China Highway Engineering Consulting Corp., a design subsidiary of China Communications Construction Group, to provide design services for highway and municipal projects, says Wong.

In another move by a Chinese firm, JSTI Inc. last September acquired EPTISA, a Spanish engineering firm that works in more than 45 countries around the world, and TestAmerica, which is the largest third-party environmental testing firm in the U.S., with 23 testing laboratories and more than 40 customer service centers, according to Allen Li, JTSI president. "These two

OVERVIEW

M&As brought material changes to the international business and layout of JSTI," expanding the firm's global footprint to nearly 3,500 overseas employees, Li says.

In a developing story, Dubai's Dar Group has apparently acquired 19.9% of WorleyParsons' stock in a takeover bid. WorleyParsons announced it had rejected a \$2.2-billion bid by Dar Group in November, saying the offer was undervalued. Many see Dar's bid as a move to diversify into the industrial and petroleum markets.

#### **Demographics 101**

In developed and developing countries, there has been a growing trend toward urbanization that has attracted the notice of international design firms. "The new generation, which we can call 'the vertical society,' is increasingly migrating to urban areas, living in buildings and moving away from suburban life," says Alexandre L'Heureux, CEO of WSP. Since this generation wants to live in an environment in which work, home, social and cultural life, and sport activities intermingle, cities need to evolve, he says. To meet this demand, cities must be rethought around major dynamic, active urban centers, he says.

Asia's growing middle class is demanding better infrastructure and fueling a demand for an increased consumer market. "The underlying demographic trends in Asia underpin our expectation of continued good opportunities in the region. We expect to see increased opportunities in the food-and-beverage, health-care, tourism and education sectors as Asia's expanding middle class looks to enjoy a fuller basket of consumer goods," says Greg Lowe, Group CEO of New Zealand's Beca Group Ltd.



"We expect to see increased opportunities in the foodand-beverage. health-care, tourism and education sectors as Asia's expanding middle class looks to enjoy a fuller basket of consumer goods."

Greg Lowe, Group CEO, Beca Group Ltd. Increasing demand for better infrastructure is boosting prospects for international firms. Water and wastewater contracts pushed up sales in the sector for Netherlandsbased Royal HaskoningDHV BV by 59% last year, now accounting for a quarter of group business, according to Anke Mastenbroek, director of the water business line.

Interest in new technologies, such as the company's Nereda wastewater treatment system, is boosting work, adds Mastenbroek. "Smart water solutions and technology will redefine everything in the water and wastewater industries," she believes.

Urbanization, even in Europe, and climate-change mitigation are creating demand for design firms, adds Carlsson. L'Heureux agrees, adding, "In 50 years, the temperature in summer in London will be 6.5° Celsius higher than it is today. As currently designed, most buildings are inadequate to cope with this daunting challenge."

Population growth, urbanization and the need for the world to upgrade or replace vital infrastructure continue to create a range of opportunities across the globe. "We expect to see a sustained flow of opportunities as we work with our clients to formulate sustainable approaches to managing these global challenges," says Lowe.

Global population rise, urbanization and competition between major cities for local investment are driving the demand for transportation services, says McNaughton. Railroads and metros underpin the SYSTRA Group, but the company is expanding into highways and bridges.

High-speed rail is "very location-specific" and demands long lead times, says McNaughton. "It's a particular market, unless you are in a country like France." Even France's high-speed program "is coming to an end."

## HOW THE TOP INTERNATIONAL DESIGN FIRMS SHARED THE 2016 MARKET

DESIGNER	# 0F	INT'L REV	ENUE	MIDDLE F	AST	ASIA		AFRIC	A	EUROP	E	UNITED S	TATES	CANAE	A	LAT. AMER.	/ CARIB.
NATIONALITY	FIRMS	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%	\$ MIL.	%
AMERICAN	81	19,748.7	30.8	2,866.7	23.8	5,076.9	37.1	640.7	17.1	5,553.1	36.5	NA	NA	4,780.3	81.7	831.1	26.9
CANADIAN	4	7,427.8	11.6	476.0	4.0	963.0	7.0	218.2	5.8	1,877.9	12.3	3,688.9	35.2	NA	NA	203.8	6.6
EUROPEAN	54	21,919.3	34.2	4,945.3	41.1	3,093.8	22.6	1,615.6	43.0	6,732.9	44.2	3,847.5	36.7	291.1	5.0	1,393.2	45.1
BRITISH	4	4,876.8	7.6	1,359.0	11.3	1,080.0	7.9	287.0	7.6	490.7	3.2	1,517.0	14.5	73.9	1.3	69.2	2.2
GERMAN	5	499.3	0.8	207.4	1.7	57.3	0.4	98.5	2.6	117.8	0.8	0.1	0.0	0.0	0.0	18.3	0.6
FRENCH	7	2,282.3	3.6	498.7	4.1	433.0	3.2	263.3	7.0	703.4	4.6	161.7	1.5	36.7	0.6	185.6	6.0
DUTCH	5	5,631.0	8.8	789.7	6.6	958.1	7.0	184.5	4.9	1,601.4	10.5	1,718.5	16.4	75.0	1.3	303.8	9.8
ITALIAN	8	871.3	1.4	370.8	3.1	82.0	0.6	119.4	3.2	210.1	1.4	22.5	0.2	17.2	0.3	49.3	1.6
SPANISH	9	2,837.2	4.4	1,151.8	9.6	147.7	1.1	456.4	12.1	301.9	2.0	151.5	1.4	38.0	0.6	590.0	19.1
OTHER EUROPEAN	16	4,921.5	7.7	567.9	4.7	335.8	2.5	206.6	5.5	3,307.6	21.7	276.2	2.6	50.4	0.9	177.0	5.7
AUSTRALIAN	6	4,373.3	6.8	298.6	2.5	678.3	5.0	256.3	6.8	592.7	3.9	1,700.8	16.2	647.5	11.1	199.2	6.5
JAPANESE	11	734.2	1.1	118.4	1.0	363.7	2.7	75.4	2.0	36.5	0.2	87.1	0.8	5.0	0.1	48.1	1.6
CHINESE	24	3,698.9	5.8	604.8	5.0	2,115.6	15.5	504.4	13.4	151.4	1.0	100.4	1.0	2.2	0.0	220.1	7.1
KOREAN	12	1,159.3	1.8	278.1	2.3	619.4	4.5	75.8	2.0	15.5	0.1	20.7	0.2	5.8	0.1	144.0	4.7
ALL OTHERS	33	5,052.5	7.9	2,446.8	20.3	772.6	5.6	371.5	9.9	267.0	1.8	1,024.5	9.8	122.0	2.1	47.9	1.6
ALL FIRMS	225	64,113.9	100.0	12,034.7	100.0	13,683.2	100.0	3,757.8	100.0	15,227.1	100.0	10,469.9	100.0	5,853.9	100.0	3,087.3	100.0
SOURCE: ENR. NOTE: EXCL	JDING \$	\$0.78 MILLIO	N FROM A	NTARCTIC/AR	CTIC OR	UNALLOCATE	)										



**ITALCONSULT SPA** is designing and supervising construction of the 3,650bed Etlik Hospital as part of Health Care City in Ankara, Turkey.

#### OVERVIEW

## The Top 10 by Market

	<b>RANK</b>		PETROLEUM Top 10 Revenue: \$10,300.9 Mil. Sector's Revenue: \$14,359.4 Mil.
Ī	1	3	FLUOR CORP.
	2	1	WORLEYPARSONS
	3	4	TECNICAS REUNIDAS
	4	2	FUGRO NV
	5	5	JACOBS
	6	9	PETROFAC LTD.
	7	0	TECHNIP
ĺ	8	**	CB&I LLC
ĺ	9	10	HYUNDAI ENGINEERING CO. LTD.
ĺ	10	**	MAIRE TECNIMONT GROUP

<b>4</b> <b>RANK</b> <b>2017</b> 2016		POWER Top 10 Revenue: \$3,778.9 Mil. Sector's Revenue: \$7,261.7 Mil.
1	1	POWER CONSTRUCTION CORP. OF CHINA
2	**	CHINA ENERGY ENGINEERING CORP. LTD.
3	**	SENER INGENIERÍA Y SISTEMAS SA
4	4	TRACTEBEL ENGINEERING SA
5	3	WS ATKINS PLC
6	2	WSP
7	5	WORLEYPARSONS
8	6	POYRY
9	**	STANTEC INC.
10	**	TETRA TECH INC.

<b>7</b> RANK 2017 2016		HAZARDOUS WASTE Top 10 Revenue: \$1,783.8 Mil. Sector's Revenue: \$2,012.1 Mil.
1	1	ARCADIS NV
2	2	AECOM
3	4	RAMBOLL GRUPPEN A/S
4	6	CH2M
5	3	GHD
6	**	WSP
7	7	FLUOR CORP.
8	9	AMEC FOSTER WHEELER
9	**	STANTEC INC.
10	**	PARSONS

2		TRANSPORTATION
RAI 2017	<b>VK</b> 2016	Top 10 Revenue: \$8,628.3 Mil. Sector's Revenue: \$15,041.4 Mil.
1	1	WSP
2	2	AECOM
3	3	DAR GROUP
4	10	WS ATKINS PLC
5	6	JACOBS
6	5	CH2M
7	**	EGIS
8	**	STANTEC INC.
9	9	ARUP
10	**	SYSTRA

5 RA 2017

> 7 8 9

10

	INDUSTRIAL						
NK 2016	Top 10 Revenue: \$2,058.8 Mil. Sector's Revenue: \$3,050.6 Mil.						
1	JACOBS						
2	INTERTEK-PSI						
3	HATCH LTD.						
5	BECHTEL						
4	FLUOR CORP.						
7	POYRY						
**	SWECO AB						
9	WSP						
6	WORLEYPARSONS						

8		SEWER/WASTE
RAI 017	<b>VK</b> 2016	Top 10 Revenue: \$1,260.9 Mil. Sector's Revenue: \$2,040.4 Mil.
1	8	STANTEC INC.
2	2	CH2M
3	3	AECOM
4	5	MOTT MACDONALD
5	**	JSTI GROUP
6	**	RAMBOLL GRUPPEN A/S
7	**	JACOBS
8	9	DAR GROUP
9	7	GHD
10	**	BLACK & VEATCH

ARCADIS NV

<b>3</b> RANK 2017 2016		BUILDING Top 10 Revenue: \$6,930.1 Mil. Sector's Revenue: \$12,113.6 Mil.
1	1	ARCADIS NV
2	3	WSP
3	2	DAR GROUP
4	4	AECOM
5	5	ARUP
6	6	STANTEC INC.
7	9	SWECO AB
8	7	JACOBS
9	8	RAMBOLL GRUPPEN A/S
10	10	WS ATKINS PLC

6		WATER
RANK 2017 2016		Top 10 Revenue: \$1,875.7 Mil. Sector's Revenue: \$3,134.2 Mil.
1	6	STANTEC INC.
2	1	ARCADIS NV
3	2	TETRA TECH INC.
4	3	AECOM
5	4	CH2M
6	7	JACOBS
7	9	BLACK & VEATCH
8	**	GHD
9	8	MOTT MACDONALD
10	**	KBR

9		MANUFACTURING
RAI 2017		Top 10 Revenue: \$711.1 Mil. Sector's Revenue: \$969.5 Mil.
1	1	LARSEN & TOUBRO LTD.
2	3	CH2M
3	4	JACOBS
4	6	ARCADIS NV
5	**	SAMOO ARCHITECTS & ENGINEERS
6	**	GOLDER ASSOCIATES CORP.
7	**	HYUNDAI ENGINEERING CO. LTD.
8	7	ARUP
9	**	SWECO AB
10	10	WSP

### Belt & Road

Some of the most prominent opportunities in Asia are the result of China's Silk Road Economic Belt and Maritime Silk Road, known as Belt & Road, designed to foster economic growth for countries in southern Asia and the Middle East. "The greatest opportunities for business in the international design market lie in Asia and in countries along the Belt & Road proposed by China," says Keith Griffiths, chairman of Aedas.

Omar Shahzad, CEO of WL Meinhardt Group, cites

a study that shows there were 8,158 new contracts, amounting to \$126 billion, signed in 61 Belt & Road countries in 2016. "Having offices in most of the 65 countries along the Belt & Road, Singapore-headquartered Meinhardt Group is well positioned to join the next wave of megadevelopments along [this] burgeoning market," he says.

Many firms are becoming more active in Asia. SYSTRA aims to expand its international work, says McNaughton. Recent acquisitions, including firms in

## The Top 10 by Region

1		ASIA/AUSTRALIA
RA 2017	NK 2016	Top 10 Revenue: \$6,231.7 Mil. Sector's Revenue: \$13,683.2 Mil.
1	1	AECOM
2	7	FLUOR CORP.
3	2	JACOBS
4	3	WSP
5	8	POWER CONSTRUCTION CORP. OF CHINA
6	4	ARUP
7	6	HYUNDAI ENGINEERING CO. LTD.
8	9	ARCADIS NV
9	5	FUGRO NV
10	**	CHINA ENERGY ENGINEERING CORP. LTD.

4		CANADA
RA 2017	NK 2016	Top 10 Revenue: \$3,864.1 Mil. Sector's Revenue: \$5,853.9 Mil.
1	1	AMEC FOSTER WHEELER
2	3	TETRA TECH INC.
3	5	AECOM
4	6	JACOBS
5	2	WORLEYPARSONS
6	**	GOLDER ASSOCIATES CORP.
7	8	EXP US SERVICES INC.
8	4	FLUOR CORP.
9	**	BUREAU VERITAS
10	**	PARSONS



2		EUROPE
RAI 2017	<b>VK</b> 2016	Top 10 Revenue: \$9,566.7 Mil. Sector's Revenue: \$15,227.1 Mil.
1	2	JACOBS
2	1	WSP
3	9	AECOM
4	7	SWECO AB
5	3	ARCADIS NV
6	4	RAMBOLL GRUPPEN A/S
7	6	FLUOR CORP.
8	8	CH2M
9	5	FUGRO NV
10	10	WORLEYPARSONS

**UNITED STATES** Top 10 Revenue: \$8,861.9 Mil

Sector's Revenue: \$10,469.9 M

5

RANK

2017 2016

5

10

\$17.85

2013

SOURCE: ENR

WSP STANTEC INC. ARCADIS NV

WS ATKINS PLC

CARDNO LTD. GHD

LARSEN & TOUBRO LTD.

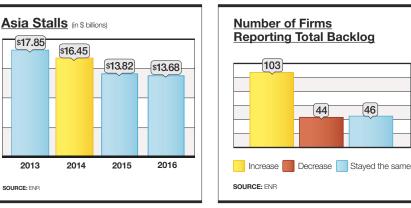
\$16.45

2014

WORLEYPARSONS DAR GROUP MOTT MACDONALD

3		MIDDLE EAST Top 10 Revenue: \$5,230.7 Mil.
RAI 2017	<b>VK</b> 2016	Sector's Revenue: \$12,034.7 Mil.
1	1	DAR GROUP
2	2	TECNICAS REUNIDAS
3	6	PETROFAC LTD.
4	3	AECOM
5	5	KHATIB & ALAMI
6	**	KBR
7	8	WS ATKINS PLC
8	10	ARCADIS NV
9	**	FUGRO NV
10	**	BECHTEL

	6		LATIN AMER./CARIBBEAN
Mil.	RAI 2017		Top 10 Revenue: \$1,284.8 Mil. Sector's Revenue: \$3,087.3 Mil.
	1	1	TECNICAS REUNIDAS
	2	6	ARCADIS NV
	3	**	SENER INGENIERÍA Y SISTEMAS SA
	4	5	FLUOR CORP.
	5	4	WORLEYPARSONS
	6	3	FUGRO NV
	7	**	HYUNDAI ENGINEERING CO. LTD.
	8	**	AYESA
	9	8	CH2M
	10	**	POWER CONSTRUCTION CORP. OF CHINA



Australia and India, give it "the ability to deploy knowledge and expertise of the global business to local markets."

Outside its home market, Sweco works on a projectby-project basis in Asia, Africa and Central America, says Carlson. "We are looking at countries where we can export our core competences. We are careful not to set up permanent offices [there]," he adds.

Mastenbroek reports growing water and wastewater work in urban India. In Vietnam and Indonesia, Royal HaskoningDHV is "steadily growing in the field of basic



For expanded content on the ENR Top Lists, see ENR.com/ toplists.

service delivery in water and wastewater treatment," she says. International funding agencies are crucial. "We're seeing an increase of private-sector involvement," she says.

From its traditional East Asian bases, including mainland China, Hong Kong and Singapore, Atkins is expanding into regional markets, including Vietnam, Indonesia and the Philippines, says Drewett. Rather than establish permanent offices there, Atkins seeks local partnerships.

With 60% of sales outside its home country, South Africa and the U.K. are Royal HaskoningDHV's biggest



ARCPLUS GROUP PLC. is designing a 790-ft-tall, 1.14-million-sq-ft commercial office building in Ho Chi Minh City, Vietnam.

foreign water and wastewater markets, notes Mastenbroek. In India, "the government's drive toward smart cities also gives us good opportunities," she says.

#### A Mixed Bag

In Europe, Scandinavia has the hottest demand. "Our base markets are in northern Europe," says Carlsson. Sweco plans to build significant share in the region, which is served by numerous design firms. It already has some 10% of the Nordic market, says Carlson.

Norway, Denmark, Germany, Belgium and the U.K. are a "good market," says Carlsson. In Germany, the company is "looking at double-digit growth," he reports.

Sweden and Norway "decided to pour money into infrastructure," says Søbye. But Danish infrastructure demand has fallen. Atkins' continental European business is largely confined to "very good" road and rail markets in Sweden and Denmark, says Drewett.

In its home base, Drewett is optimistic about the U.K. infrastructure market, despite uncertainties surrounding the country's planned departure from the European Union [Brexit] in 2019. "It's had very little impact [on us] thus far," he says. Carlsson agrees, and McNaughton is relaxed about Brexit, describing the U.K. as "a future core market." Søbye is also optimistic about U.K. infrastructure. If the post-Brexit economy declines, the government will need to invest, he believes.

Royal HaskoningDHV also finds a good market in the U.K., "spurred by the need to upgrade and extend old assets applying our new technologies," adds Mastenbroek.

In the Middle East, the plunge in oil prices has hit many nations hard, depressing not just the local petroleum market, but also the publicly funded infrastructure and building markets that these nations fund. However, many firms believe the worst is over.

"It seems that the [Gulf Cooperation Council] countries are healing from the drop in the oil prices last year and the general global economic slowdown. One might even consider that this negative experience has finally transformed itself into an opportunity for international designers," says Birhan Emre Yazici, CEO of Turkey's NKY. The need for public service architecture, urban retrofitting projects and tourist facilities increased toward the end of 2016, he notes.

However, the Middle East remains a "demanding" market that is politically unpredictable and subject to fierce competition, says Søbye. Getting paid is still difficult, too. Drewett reports a hiatus in rail and infrastructure projects in the U.A.E., while real estate is picking up.

Many firms are wary of working in Iraq. "The country has tremendous financial pressures due to the ongoing war with ISIS, the oil-price slump, and acute mismanagement and corruption. [They] have affected the growth Buildings Homage to the Written Word



Aedas (No. 61) has designed the Xinhua Bookstore Group Jiefangbei Book City Mixed-Use Project in Chongqin, China. Pooling into folds at the mezzanine at the bottom, the facade is inspired by a long Chinese scroll.



"As engineers. I believe we have two options: **Continue as we** are and be commoditized or, even worse, be replaced by machines. Alternatively, we must embrace a disrupted future and become better designers and innovators."

Kourosh Kayvani, Global Director of Excellence and Expertise, Aurecon tremendously," says Ammar Al Assam, CEO, Dewan Architects + Engineers. He says projects are almost nonexistent and collecting receivables is a great concern. "This is especially significant given that Iraq is producing its highest volume of oil—at close to 4 million barrels with not much to show for it, unfortunately," he adds.

Africa continues to be a difficult market for many international designers. The drop in oil prices hit many African nations hard, causing their markets to slump. For example, the Angola, Mozambique and Algeria markets are soft. "Due to the oil and gas price decline, clients have no foreign currency and try to pay in local currency," says Ilidio de Ayala Serodio, PCG president, Profabril Group.

Other firms also are seeing the impact in Africa of low oil prices. "Our exposure to the oil-and-gas sector had two different set of impacts: On the one hand, oil-dependent countries such as Gabon, Congo and Nigeria significantly reduced their budgets due to low oil prices, and our business there slowed down. On the other hand, large hydrocarbon discoveries in Senegal, Cote d'Ivoire, Ghana and Mauritania are creating new opportunities for us," says Mosbah Kanzari, deputy general manager of Tunisia's Studi International.

However, Kanzari continues to be optimistic about Africa, saying, "We feel strongly optimistic about the design market in sub-Saharan Africa, where the infrastructure gap is still significant and

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**STUDI INTERNATIONAL** has created an oil-and-gas division to leverage its current presence in oil-producing African countries.

the demand for professional and on-the-ground design capability very large."

## A New Approach

The game is changing for international firms. It is no longer enough simply to provide a quick design or a quick fix, especially in developing countries. Clients are beginning to rely on international design firms to help develop programs and oversee construction to make the best of a country's limited resources.

Increasingly, clients in international markets and developing countries are seeking full-service and coownership models from their engineering and project consultants, says Yuichiro Motomura, CEO of Japan's PADECO Co. Ltd. He says developing countries are no longer satisfied with firms' "touch-and-go" models that provide merely advisory or project design services.

Clients want designers not only for feasibility studies but also to manage the whole project, from concept to commissioning, says Motomura. "So, gone are the days when we can merely be visitors to these countries. Our engineering teams now have to be closely embedded on the ground, ensuring successful delivery of infrastructure projects actually in operation."

Many international design firms say they must not only solve the problem in front of them but also look at the client's overall needs and plan long-term solutions. "As engineers, I believe we have two options: Continue as we are and be commoditized or, even worse, be replaced by machines. Alternatively, we must embrace a disrupted future and become better designers and innovators that truly bring ideas to life and shape the world," says Kourosh Kayvani, global director of excellence and expertise for Australia's Aurecon.

"We can steer thinking away from expedient, shortterm economic and political solutions. We can become creators of both elegant and functional solutions to address society's big challenges if we embed ourselves within the process ... with a passion for design," says Kayvani.



New technologies are providing substantial advantages for international design firms, often providing significant efficiencies. Virtually all major firms are investing heavily in new hardware and software.

An example of this trend, Australia's GHD (No. 25) has designed and implemented a complete Big Data platform, which eliminates the need for on-premises IT infrastructure to collect, process, model, store and present data, says CEO Ashley Wright.

"We are also able to host client data in our secure cloud environment," Wright says. This technology was recently used on a project to provide real-time vibration and stability monitoring of critical infrastructure. The client was able to protect a major asset by using structuremounted sensors, a networking solution to transmit the data in real time, and data analytics, he says.

But there are some areas where technology can take the bite out of operating in dangerous situations. For example, Wright notes that combining high-resolution drone photos with 3D modeling has enabled firms to dramatically streamline inspection of structures (see image). "Many structures we inspect are not readily accessible, and some rivers in Queensland, Australia, where we have done this work, are home to crocodiles, so there are obvious health and safety benefits, as well," Wright notes.

## How To Read the Tables

**Companies** are ranked according to revenue for design services performed in 2016 in \$ millions (\*). Those with subsidiaries are indicated by (†). For information on subsidiaries and where each firm worked outside of the U.S., see www.enr. com. \*\*Firms not ranked last year. Some markets may not add up to 100% due to omission of "other" miscellaneous market category and rounding. **NA**-Not available.

**Key to type of firm** A-architect; E-engineer; EC-engineer-contractor; AE-architect-engineer; EA-engineerarchitect; ENV-environmental; GE-geotechnical engineer; L-landscape architect; P-planner; O-other. Other combinations possible. Firms classified themselves.

**General Building** includes commercial buildings, offices, stores, educational facilities, government buildings, hospitals, medical facilities, hotels, apartments, housing, etc.

**Manufacturing** includes auto, electronic assembly, textile plants, etc.

**Power** comprises thermal and hydroelectric power plants, waste-to-energy plants, transmission lines, substations, cogeneration plants, etc.

Water Supply includes dams, reservoirs, transmission pipelines, distribution mains, irrigation canals, desalination and potability treatment plants, pumping stations, etc.

Sewage/Solid Waste includes sanitary and storm sewers, treatment plants, pumping plants, incinerators, industrial waste facilities, etc.

**Industrial Process** includes pulp and paper mills, steel mills, non-ferrous metal

refineries, pharmaceutical plants, chemical plants, food and other processing plants, etc.

**Petroleum** comprises refineries, petrochemical plants, offshore facilities, pipelines, etc.

Transportation includes airports, bridges, roads, canals, locks, dredging, marine facilities, piers, railroads, tunnels, etc.

Hazardous Waste includes chemical and nuclear-waste treatment, asbestos and lead abatement, etc.

**Telecommunications** includes transmission lines and cabling, towers and antennae, data centers, etc. THE TOP 225 INTERNATIONAL DESIGN FIRMS

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1	1	WSP, Montreal, Quebec, Canada <sup>†</sup>	EC	4,070.9	81	28	1	7	1	2	4	53	2	0
2	5	AECOM, Los Angeles, Calif., U.S.A. <sup>†</sup>	EAC	3,410.0	46	29	0	4	6	4	1	46	11	0
3	2	ARCADIS NV, Amsterdam, The Netherlands <sup>+</sup>	EC	3,369.0	91	37	1	2	9	2	3	8	17	0
4	4	JACOBS, Dallas, Texas, U.S.A.	EAC	2,946.0	46	14	2	3	4	2	50	24	0	1
5	3	WORLEYPARSONS, North Sydney, NSW, Australia	EC	2,372.0	89	1	0	11	0	0	79	2	1	0
6	7	DAR GROUP, Dubai, U.A.E. <sup>†</sup>	EA	2,275.2	100	49	0	3	2	3	4	39	0	1
7	16	STANTEC INC., Edmonton, Alberta, Canada <sup>†</sup>	A	2,122.0	70	20	0	8	19	20	6	22	2	0
8	8	FLUOR CORP., Irving, Texas, U.S.A. <sup>†</sup>	EC	2,071.4	63	0	1	1	0	0	95	0	3	0
9	6	FUGRO NV, Leidschendam, The Netherlands <sup>†</sup>	GE	1,778.0	91	12	0	10	3	0	68	3	0	3
10	15	WS ATKINS PLC, Epsom, Surrey, U.K. <sup>†</sup>	EA	1,553.3	55	22	0	20	4	0	3	51	0	0
11	10	TECNICAS REUNIDAS, Madrid, Spain	EC	1,522.8	94	0	0	5	1	0	93	1	0	0
12	13	CH2M, Englewood, Colo., U.S.A. <sup>†</sup>	E	1,309.3	37	0	4	0	12	15	8	48	14	0
	9	MOTT MACDONALD, Croydon, Surrey, U.K. <sup>†</sup>	EC	1,299.9	60	12	0	12	8	8	23	31	1	0
14	14	ARUP, London, U.K. <sup>†</sup>	E	1,220.6	69	41	2	2	2	3	7	36	1	2
15	26	SWECO AB, Stockholm, Sweden <sup>†</sup>	EA	1,199.0	62	35	2	9	4	5	10	31	1	0
	18	RAMBOLL GRUPPEN A/S, Copenhagen S, Denmark <sup>†</sup>	E	1,159.4	74	30	0	6	1	6	4	26	24	0
17	27	POWER CONSTRUCTION CORP. OF CHINA, Beijing, China <sup>†</sup>	EC	1,090.6	15	0	0	86	0	1	0	1	0	11
18	20	KBR, Houston, Texas, U.S.A. <sup>†</sup>	EC	958.0	50	0	0	0	8	0	31	19	0	0
19	12	AMEC FOSTER WHEELER, Atlanta, Ga., U.S.A. <sup>†</sup>	EC	908.0	47	11	1	17	2	1	32	7	5	0
	11	SNC-LAVALIN INC., Montreal, Quebec, Canada <sup>†</sup>	EC	883.9	44	1	0	15	0	0	50	17	0	0
+ t	28	TETRA TECH INC., Pasadena, Calif., U.S.A.	E	837.0	32	1	1	20	33	3	21	18	4	0
	25	PETROFAC LTD., Jersey, Channel Islands, U.K. <sup>†</sup>	EC	803.0	100	0	0	0	0	0	100	0	0	0
	**	<b>TECHNIP,</b> Paris, France <sup>†</sup>	EC	775.0	94	0	0	0	0	0	100	0	0	0
	21	HYUNDAI ENGINEERING CO. LTD., Seoul, S. Korea	EC	748.0	87	1	4	19	0	3	73	0	0	0
·	23	GHD, Sydney, NSW, Australia <sup>†</sup>	EA/ENV	739.3	60	27	0	1	15	9	7	13	20	0
†	17	BECHTEL, San Francisco, Calif., U.S.A. <sup>†</sup>	EC	724.0	45	1	0	3	1	0	68	27	1	0
	**	EGIS, Saint-Quentin-en-Yvelines, France <sup>†</sup>	EC	715.0	63	11	0	2	5	0	0	82	0	C
	**	<b>GOLDER ASSOCIATES CORP.,</b> Palm Beach Gardens, Fla., U.S.A. <sup>†</sup>	E	684.6	76	12	4	5	2	3	26	20	0	1
29	**	CHINA ENERGY ENGINEERING CORP. LTD., Beijing, China <sup>T</sup>	EC	644.8	10	0	0	100	0	0	0	0	0	0
	19	<b>CB&amp;I LLC,</b> The Woodlands, Texas, U.S.A.T	EC	625.7	28	0	0	0	0	0	99	0	0	0
	33	INTERTEK-PSI, Arlington Heights, III., U.S.A. <sup>†</sup>	E	584.6	49	0	0	20	0	0	80	0	0	(
	51	SENER INGENIERÌA Y SISTEMAS SA, Las Arenas (Getxo), Vizcaya, Spain†	EA	580.5	97	0	0	72	0	0	4	24	0	(
	32	COWI A/S, Kongens Lyngby, Denmark <sup>†</sup>	EC	576.9	69	21	0	0	6	10	0	52	1	(
	22	CARDNO LTD., Brisbane, Queensland, Australia <sup>†</sup>	EC	568.3	63	0	0	0	0	0	0	0	0	(
	48	SURBANA JURONG PRIVATE LTD., Singapore <sup>†</sup>	EC	498.0	64	28	0	13	7	0	1	45	3	0
	40	LARSEN & TOUBRO LTD., Mumbai, Maharashtra, India <sup>†</sup>	EC	497.5	83	0	79 0	0 43	0	0	16	5 11	0	
	35	POYRY, Vantaa, Finland <sup>†</sup>		458.0	78						31			0
	38	MAIRE TECNIMONT GROUP, Milan, Italy <sup>†</sup>	EC	450.5	84	0	0	6	0	0	93	1 70	0	0
	30	PARSONS, Pasadena, Calif., U.S.A. <sup>†</sup>	EC	450.0 441.0	30 97	12 51	0	0	3 14	0	2	70 15	9	4
÷	39 37	KHATIB & ALAMI, Beirut, Lebanon <sup>†</sup> TRACTEBEL ENGINEERING SA, Brussels, Belgium <sup>†</sup>	EC	441.0	97 65	3	0	3 84	0	0	2	6	0	
	42	SYSTRA, Paris, France <sup>†</sup>	EC	429.3	60	0	0	04	0	0	0	100	0	0
	42	BLACK & VEATCH, Overland Park, Kan., U.S.A. <sup>†</sup>	EC	420.0	30	2	0	40	29	15	13	0	0	0
t	40	CHINA COMMUNICATIONS CONSTRUCTION GROUP LTD., Beijing, China <sup>†</sup>	EC	353.7	8	2	0	40	- 29	0	0	74	0	0
î	24	HATCH LTD., Mississauga, Ontario, Canada <sup>†</sup>	EC	351.0	45	0	0	9	4	0	64	11	0	0
	43	ROYAL HASKONINGDHV, Amersfoort, The Netherlands <sup>†</sup>	EC	342.2		11	1	7	16	9	6	49	0	2
	44	AURECON, Melbourne, Victoria, Australia	EC	332.1	46	37	4	7	5	0	5	22	0	2
	52	AF GROUP, Stockholm, Sweden <sup>†</sup>	E	327.4	25	14	5	42	0	0	12	26	0	
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· +		LOUIS BERGER, Morristown, N.J., U.S.A.	I FAP	304.3	40									
49	45 53	LOUIS BERGER, Morristown, N.J., U.S.A. <sup>†</sup> EXP US SERVICES INC., Chicago, III., U.S.A.	EAP	304.3 285.3	48 61	31	0	3	6	7	5	14	0	0



**WORLEYPARSONS** on May 22 won a five-year agreement by Shell Global Solutions International for EPCM services for downstream projects.

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S    DEPCN MODE EDDUCY box Japa <sup>1</sup> EC    2273    34    2    0    11    12    6    0    4      G    O    ONING FETROLOME NUMEERIG CONSTRUCTION ORP, Right Churil    EC    2100    G    0			FIRM		IN	% OF	GENERAL	MANUFACTION	POWER	Water Slipe	SEWER/W	MDUS. , PET	TRANSPOD	HAZARDOUC	TELECOM
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Is    EXEMPLA Y PROFESS ALTORES, Danif    EA    215.0    66    70    00    70    00    90      Image: Select	54	77	CHINA PETROLEUM ENGINEERING & CONSTRUCTION CORP., Beijing, China <sup>†</sup>	EC	219.0	50	0	0	0	0	0	100	0	0	0
9    BUREAU VENTAS, I of Ladordale, Pla, USA.!    E    212.6    33    21    0    10    35    0    20    0      9    30    GENSLER, San France, Cat., USA.    A    211.4    18    33    21    0    10    43    22    2    3    21      9    90    FICHTNER GROUP, Statignt, Garmay <sup>1</sup> EC    194.7    83    4    1    83    9    0    0    1    84    9    2    0    25    0    25    0    25    0    25    0    2    0    25    0    2    2    3    4    0   0    0    0 <td>÷</td> <th>_</th> <td></td> <td>EA</td> <td>215.0</td> <td>86</td> <td>18</td> <td>0</td> <td>8</td> <td>13</td> <td>7</td> <td>0</td> <td>50</td> <td>0</td> <td>0</td>	÷	_		EA	215.0	86	18	0	8	13	7	0	50	0	0
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4  AEDAS, Horg Korg, China  A  1983  98  82  0  0  0  0  1  8    61  11  Consultine Glowiers, Ruinformaticus, Austra <sup>1</sup> EC  187.1  64  1  0  1  2  21  3  42  15    64  55  CHINA, Man, Mai, Li, L <sup>1</sup> Li, L <sup>1</sup> King, China  EC  187.1  64  1  1  4  180.0  9  74  0  2  2  3  0  15  1    64  55  CHINA, Mann, Mai, Li, L <sup>1</sup> Li, L <sup>1</sup> Li, L <sup>1</sup> Li, L <sup>1</sup> 8  16  11  1  8  16  11  1  8  16  11  1  8  16  11  1  8  16  11  1  8  16  11  1  8  16  11  1  8  16  11  11  8  16  11  1  8  16  11  11  11  11  11  11  11  11  11  11  11  11														0	1
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66  69  ASSOCIATED CONSULTING ENGINEERS, Athems, Amarousion, Greecel <sup>1</sup> EA  151.0  94  31  0  2  10  30  4  19  21    67  71  ARTELA, Lyon, Transof  ED  142.9  76  0	+													0	0
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68    61    CHYDDA CORP., Yokshama, Kanagawa, Japan <sup>1</sup> EC    142.9    76    0    0    2    0    0    67    0    0      69    SKIDMORE, OWINS & MERRILL LIP, New York, N.Y., USA. <sup>1</sup> AE    141.0    41    95    0														2	1
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75  79  KEO INTERNATIONAL CONSULTANTS, Shuwakh, Kuwait  APP  130.2  94  76  0  0  2  11  0  11  0  11  0  11  0  11  0  11  0  11  0  11  0  11  0  13  1  0														0	0
76  94  ORIENTAL CONSULTANTS GLOBAL (ACKG LTD.), Tokyo, Japan!  EC  128.5  30  9  0  1  4  1  0  83    77  78  WOODS BAGOT ARCHITECTS PC, San Francisco, Calit, USA. <sup>†</sup> A  125.0  81  94  0  0  0  0  6  0    78  84 AVESA, Sevila, Spain  EC  124.6  68  5  0  4  22  5  10  53  0    97  75  AEGION CORP, Chesterfield, Mo., USA.  EC  124.0  88  62  0  0  0  1  98  1  0    01  85  PROGER SPA, Rome, Italy <sup>†</sup> EA  120.1  81  82.  0  0  0  15  3  0    18  OCI CORP, Philadelphia, Pa., USA. <sup>†</sup> A  115.5  80  0									-					0	0
77  78  WOODS BAGOT ARCHITECTS PC, San Francisco, Calif., U.S.A.†  A  125.0  81  94  0  0  0  0  6  0    78  33  AYESA, Sevilla, Spain  EC  124.6  688  5  0  4  22  5  10  53  0    79  75  AEGION CORP, Chesterfield, Mo., U.S.A.  EC  124.0  41  5  0  0  0  8  84  3  0    80  "SAIPEM SPA, San Donato Milanese, Italy"  EA  120.0  38  0  0  0  0  15  33  0    80  CD CORP, Philadephine, Pau, USA.†  EA  119.5  26  20  7  0  0  0  15  0  0  0  0  0  0  15  0								-	0					0	0
78  83  AYESA, Sevilla, Spain  EC  124.6  68  5  0  4  22  5  10  53    79  75  AEGION CORP, Chesterfield, Mo., U.S.A.  EC  124.0  41  5  0  0  0  8  84  3  0    80  ***  SAIPEM SPA, San Donato Milanese, Italy  EC  124.0  39  0  0  0  1  98  1  0    81  66  CDI CORP, Philadelphia, Pa., U.S.A.†  EA  120.1  81  82  0  0  0  15  3  0    82  60  CDI CORP, Philadelphia, Pa., U.S.A.†  EA  119.5  26  20  7  0  0  0  15  0  0  0  0  0  0  0  15  0	+	94	ORIENTAL CONSULTANTS GLOBAL (ACKG LTD.), Tokyo, Japan <sup>†</sup>	EC	128.5	30	9	0		4		0	83	1	0
79  75  AEGION CORP, Chesterfield, Mo., U.S.A.  EC  124.0  41  5  0  0  8  84  3  0    80  **  SAIPEM SPA, San Donato Milanese, Italy  EC  124.0  39  0  0  0  0  1  98  1  0    81  85  PROGER SPA, Rome, Italy <sup>1</sup> EA  120.1  81  82  0  0  0  0  15  3  0    82  60  CDI CORP, Philadelphia, Pa., SOCIATES PC, New York, N.Y., U.S.A. <sup>†</sup> A  116.9  74  85  0  0  0  0  0  0  0  15  0    84  89  BECA GROUP LTD., Auckland, New Zealand <sup>†</sup> E  115.5  80  0	+	78	WOODS BAGOT ARCHITECTS PC, San Francisco, Calif., U.S.A. <sup>†</sup>	A	125.0	81			0					0	0
80  **  SAIPEM SPA, San Donato Milanese, Italy  EC  124.0  39  0  0  0  1  98  1    81  85  PROGER SPA, Rome, Italy <sup>†</sup> EA  120.1  81  82  0  0  0  15  3  0    82  60  CDI CORP, Philadelphia, Pa., USA. <sup>†</sup> EA  119.5  26  20  7  0  0  0  0  15  3    83  74  KOHN PEDERSEN FOX ASSOCIATES PC, New York, N.Y., USA. <sup>†</sup> A  116.9  74  85  0		_	AYESA, Sevilla, Spain	EC	124.6	68	5	0	4	22		10	53	0	1
81  85  PROGER SPA, Rome, Italy <sup>†</sup> EA  120.1  81  82  0  0  0  15  3    82  60  CDI CORP, Philadelphia, Pa., U.S.A. <sup>†</sup> EA  119.5  26  20  7  0  0  0  50  22  0    83  74  KOHN PEDERSEN FOX ASSOCIATES PC, New York, N.Y., U.S.A. <sup>†</sup> A  116.9  74  85  0	79	75	AEGION CORP., Chesterfield, Mo., U.S.A.	EC	124.0	41	5	0	0	0	8	84	3	0	0
82  60  CDI CORP, Philadelphia, Pa., U.S.A.†  EA  119.5  26  20  7  0  0  50  22  0    83  74  KOHN PEDERSEN FOX ASSOCIATES PC, New York, N.Y., U.S.A.†  A  116.9  74  85  0  0  0  0  15  0    84  89  BECA GROUP LTD., Auckland, New Zealand†  EA  116.8  31  28  19  5  8  0  13  25  0    85  31  AUSENCO LTD., South Brisbane, Queensland, Australia†  E  115.5  80  0	80	**	SAIPEM SPA, San Donato Milanese, Italy	EC		39	0	0	0	0	1	98	1	0	0
83  74  KOHN PEDERSEN FOX ASSOCIATES PC, New York, N.Y., U.S.A.†  A  116.9  74  85  0  0  0  0  15  0    84  89  BECA GROUP LTD., Auckland, New Zealand†  EA  116.8  31  28  19  5  8  0  13  25  0    85  81  AUSENCO LTD., South Brisbane, Queensland, Australia†  E  115.5  80  0 </td <td>81</td> <th>85</th> <td>PROGER SPA, Rome, Italy<sup>†</sup></td> <td>EA</td> <td>120.1</td> <td>81</td> <td>82</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>15</td> <td>3</td> <td>0</td> <td>0</td>	81	85	PROGER SPA, Rome, Italy <sup>†</sup>	EA	120.1	81	82	0	0	0	0	15	3	0	0
84  89  BECA GROUP LTD., Auckland, New Zealand <sup>†</sup> EA  116.8  31  28  19  5  8  0  13  25  0    85  81  AUSENCO LTD., South Brisbane, Queensland, Australia <sup>†</sup> E  115.5  80  <	82	60	CDI CORP., Philadelphia, Pa., U.S.A. <sup>†</sup>	EA	119.5	26	20	7	0	0	0	50	22	0	0
88  1  AUSENCO LTD., South Brisbane, Queensland, Australia <sup>†</sup> E  115.5  80  0	83	74	Kohn Pedersen fox associates PC, New York, N.Y., U.S.A. $^\dagger$	A	116.9	74	85	0	0	0	0	0	15	0	0
88  2  EHAF CONSULTING ENGINEERS, Cairo, Egypt  AE  112.4  80  58  0  0  0  7  35  0    87  NORR, Chicago, III, U.S.A.†  AE  109.5  73  96  0  0  0  0  0  4  0    88  93  MORRISON HERSHFIELD, Atlanta, Ga., U.S.A.†  EA  108.7  84  43  0  0  1  3  0  45  0    99  JASSYSTEM, Paris, France <sup>†</sup> EC  108.0  33  13  0  80  0  0  7  0  1  71  0 <td></td> <th></th> <td></td> <td>EA</td> <td>116.8</td> <td></td> <td>28</td> <td>19</td> <td>5</td> <td>8</td> <td>0</td> <td>13</td> <td>25</td> <td>0</td> <td>0</td>				EA	116.8		28	19	5	8	0	13	25	0	0
87  NORR, Chicago, III., U.S.A.†  AE  109.5  73  96  0	85	81	<b>AUSENCO LTD.,</b> South Brisbane, Queensland, Australia <sup>†</sup>	E	115.5	80	0	0	0	0	0	0	0	0	0
88  93  MORRISON HERSHFIELD, Atlanta, Ga., U.S.A.†  EA  108.7  84  43  0  0  1  3  0  45    89  91  ASSYSTEM, Paris, France <sup>†</sup> EC  108.0  33  13  0  80  0  0  7  0  0    90  72  TEBODIN BV, The Hague, The Netherlands  E  107.0  54  7  14  7  0  1  71  0  0    91  95  KEPCO ENGINEERING & CONSTRUCTION CO., Gyeongsangbuk-do, S. Korea  AE  106.2  27  0  0  10  0 </td <td>86</td> <th>82</th> <td>EHAF CONSULTING ENGINEERS, Cairo, Egypt</td> <td>AE</td> <td>112.4</td> <td>80</td> <td>58</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>7</td> <td>35</td> <td>0</td> <td>0</td>	86	82	EHAF CONSULTING ENGINEERS, Cairo, Egypt	AE	112.4	80	58	0	0	0	0	7	35	0	0
89  91  ASSYSTEM, Paris, France <sup>†</sup> EC  108.0  33  13  0  80  0  0  7  0  0    90  72  TEBODIN BV, The Hague, The Netherlands  E  107.0  54  7  14  7  0  1  71  0  0    91  95  KEPCO ENGINEERING & CONSTRUCTION CO., Gyeongsangbuk-do, S. Korea  AE  106.2  27  0  0  100  0 <td>87</td> <th>87</th> <td>NORR, Chicago, III., U.S.A.<sup>†</sup></td> <td>AE</td> <td>109.5</td> <td>73</td> <td>96</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>4</td> <td>0</td> <td>0</td>	87	87	NORR, Chicago, III., U.S.A. <sup>†</sup>	AE	109.5	73	96	0	0	0	0	0	4	0	0
90  72  TEBODIN BV, The Hague, The Netherlands  E  107.0  54  7  14  7  0  1  71  0  0    91  95  KEPCO ENGINEERING & CONSTRUCTION CO., Gyeongsangbuk-do, S. Korea  AE  106.2  27  0  0  100  0	88	93	MORRISON HERSHFIELD, Atlanta, Ga., U.S.A. <sup>†</sup>	EA	108.7	84	43	0	0	1	3	0	45	0	7
91  95  KEPCO ENGINEERING & CONSTRUCTION CO., Gyeongsangbuk-do, S. Korea  AE  106.2  27  0  0  100  0 <td>89</td> <th>91</th> <td>ASSYSTEM, Paris, France<sup>†</sup></td> <td>EC</td> <td>108.0</td> <td>33</td> <td>13</td> <td>0</td> <td>80</td> <td>0</td> <td>0</td> <td>7</td> <td>0</td> <td>0</td> <td>0</td>	89	91	ASSYSTEM, Paris, France <sup>†</sup>	EC	108.0	33	13	0	80	0	0	7	0	0	0
92  76  HOK, St. Louis, Mo., U.S.A.  AE  105.9  25  94  0  0  0  0  0  6  0    93  **  JSTI GROUP, Nanjing, Jiangsu, China <sup>†</sup> EC  105.5  24  1  0  4  9  67  0  10  7    94  88  PM GROUP, Dublin, Ireland <sup>†</sup> EA  104.4  51  4  6  2  0  0  78  0  0    95  96  SSH, Manama, Bahrain  AE  104.3  93  61  0  1  1  5  2  24  0    96  SSH, Manama, Bahrain  AE  104.3  93  61  0  1  1  5  2  24  0    96  SSH, Manama, Bahrain  AE  102.2  66  2  0  10  0  8  0	90	72	TEBODIN BV, The Hague, The Netherlands	E	107.0	54	7	14	7	0	1	71	0	0	0
93  **  JSTI GROUP, Nanjing, Jiangsu, China <sup>†</sup> EC  105.5  24  1  0  4  9  67  0  10  7    94  88  PM GROUP, Dublin, Ireland <sup>†</sup> EA  104.4  51  4  6  2  0  0  78  0  0    95  96  SSH, Manama, Bahrain  AE  104.3  93  61  0  1  1  5  2  24  0    96  **  CHINA TIANCHEN ENGINEERING CORP., Tianjin, China  EA  102.2  66  2  0  10  0  84  0  0    97  **  NKY ARCHITECTS AND ENGINEERIS, Ankara, Turkey <sup>†</sup> AE  95.3  79  100  <	91	95	KEPCO ENGINEERING & CONSTRUCTION CO., Gyeongsangbuk-do, S. Korea	AE	106.2	27	0	0	100	0	0	0	0	0	0
94  88  PM GROUP, Dublin, Ireland <sup>†</sup> EA  104.4  51  4  6  2  0  0  78  0  0    95  96  SSH, Manama, Bahrain  AE  104.3  93  61  0  1  1  5  2  24  0    96  **  CHINA TIANCHEN ENGINEERING CORP., Tianjin, China  EA  102.2  66  2  0  10  0  84  0  0    97  **  NKY ARCHITECTS AND ENGINEERING CORP., Tianjin, China  EA  102.2  66  2  0  10  0  0  84  0  0    97  **  NKY ARCHITECTS AND ENGINEERING, Cork, Ireland <sup>†</sup> EC  95.3  79  100  0	92	76	HOK, St. Louis, Mo., U.S.A.	AE	105.9	25	94	0	0	0	0	0	6	0	0
96  SSH, Manama, Bahrain  AE  104.3  93  61  0  1  1  5  2  24  0    96  **  CHINA TIANCHEN ENGINEERING CORP., Tianjin, China  EA  102.2  66  2  0  10  0  84  0  0    97  **  NKY ARCHITECTS AND ENGINEERS, Ankara, Turkey <sup>†</sup> AE  95.3  79  100  0	93	**	<b>JSTI GROUP,</b> Nanjing, Jiangsu, China <sup>†</sup>	EC	105.5	24	1	0	4	9	67	0	10	1	0
96    **    CHINA TIANCHEN ENGINEERING CORP., Tianjin, China    EA    102.2    66    2    0    10    0    84    0    0      97    **    NKY ARCHITECTS AND ENGINEERS, Ankara, Turkey <sup>†</sup> AE    95.3    79    100    0	94	88	PM GROUP, Dublin, Ireland <sup>†</sup>	EA	104.4	51	4	6	2	0	0	78	0	0	4
97    **    NKY ARCHITECTS AND ENGINEERS, Ankara, Turkey <sup>†</sup> AE    95.3    79    100    0	95	96	SSH, Manama, Bahrain	AE	104.3	93	61	0	1	1	5	2	24	0	0
97    **    NKY ARCHITECTS AND ENGINEERS, Ankara, Turkey <sup>†</sup> AE    95.3    79    100    0	96	**	CHINA TIANCHEN ENGINEERING CORP., Tianjin, China	EA	102.2	66	2	0	10	0	0	84	0	0	0
98    101    DPS ENGINEERING, Cork, Ireland <sup>†</sup> EC    92.0    66    0	÷	**	NKY ARCHITECTS AND ENGINEERS, Ankara, Turkey <sup>†</sup>	AE	95.3	79	100	0	0	0	0	0	0	0	0
99  112  ITALCONSULT SPA, Rome, Italy  EC  91.5  97  47  0  0  7  6  0  40  0    100  98  CONSOLIDATED CONTRACTORS GROUP, Athens, Attica, Greece <sup>†</sup> C  90.3  100  14  0  2  0  0  48  37  0    101  31  WOOD GROUP, Houston, Texas, U.S.A. <sup>†</sup> EC  78.5  13  0  0  0  0  100  0	t i i	101		EC		66	0	0	0	0	0	0	0	0	0
100    98    CONSOLIDATED CONTRACTORS GROUP, Athens, Attica, Greece <sup>†</sup> C    90.3    100    14    0    2    0    0    48    37    0      101    31    WOOD GROUP, Houston, Texas, U.S.A. <sup>†</sup> EC    78.5    13    0    0    0    0    100    0	t i	_		EC	91.5	97	47		0	7	6	0	40	0	0
101    31    WOOD GROUP, Houston, Texas, U.S.A. <sup>†</sup> EC    78.5    13    0    0    0    0    100    0    0	t i	_												0	0
	÷			<u> </u>										0	0
102 100 ECG ENGINEERING CONSULTANTS GROUP SA, Cairo, Egypt EA 77.5 77 75 0 4 10 0 4 5 0				<u> </u>										0	2

#25 **GHD** is designing upgrades and the rehabilitation of the 120-year-old wastewater-collection system in Oswego, N.Y.

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RA 2017	<b>NK</b> 2016	FIRM	FIRM TYPE	2016 INT'L IN \$ MIL	- <mark>REVENUE</mark> % OF TOTAL REV.	GENERAL D.	MANUFACTUR	POWER	WATER SUpp.	SEWER / W.	NDUS, JDF	TRANSPORT	HAZARDOUK	TELECOM
103	103	ATLAS TEXAS CONSTRUCTION AND TRADING INC., Katy, Texas, U.S.A. <sup>†</sup>	EA	74.6	100	100	0	0	0	0	0	0	0	0
104	41	SK E&C, Seoul, S. Korea <sup>†</sup>	EA	70.6	53	0	0	23	0	0	77	0	0	0
105	135	DOHWA ENGINEERING CO. LTD., Seoul, S. Korea	EC	64.1	25	0	0	47	5	4	0	36	0	0
106	104	SETEC, Paris, France <sup>†</sup>	EC	63.4	22	4	2	0	2	6	0	86	0	0
107	110	ENERGOPROJEKT HOLDING PLC, Belgrade, Serbia <sup>†</sup>	EC	60.2	79	0	0	93	7	0	0	0	0	0
108	120	PERKINS EASTMAN, New York, N.Y., U.S.A. <sup>†</sup>	A	60.2	28	100	0	0	0	0	0	0	0	0
109	107	INGENIERÌA Y ECONOMIA DEL TRANSPORTE SME MP SA, Madrid, Spain†	EC	57.7	27	0	0	0	0	0	0	100	0	0
110	114	EMPRESARIOS AGRUPADOS, Madrid, Spain <sup>†</sup>	EA	57.6	58	0	0	70	0	0	0	2	4	6
111	99	SARGENT & LUNDY LLC, Chicago, III., U.S.A. <sup>†</sup>	E	57.3	12	0	0	100	0	0	0	0	0	0
112	**	CHINA ALUMINUM INTERNATIONAL ENGINEERING CORP., Beijing, China <sup>†</sup>	EA	56.8	25	40	0	0	0	0	60	0	0	0
113	119	ARCPLUS GROUP PLC, Shanghai, China <sup>†</sup>	AE	55.0	11	100	0	0	0	0	0	0	0	0
114	108	WATG + WIMBERLY INTERIORS, Irvine, Calif., U.S.A. <sup>†</sup>	A	52.8	79	100	0	0	0	0	0	0	0	0
115	121	INGEROP, Rueil-Malmaison, France <sup>†</sup>	EC	49.2	22	28	18	0	3	0	0	51	0	0
116	122	CHINA INTERNATIONAL WATER & ELECTRIC CORP. (CWE), Beijing, China <sup>†</sup>	EC	48.4	100	5	0	69	7	0	3	16	0	0
117	109	THORNTON TOMASETTI INC., New York, N.Y., U.S.A.	EA	48.3	20	95	1	1	0	0	0	2	0	0
118	123	STUDI INTERNATIONAL, Tunis, Tunisia <sup>†</sup>	EC	47.8	82	19	0	4	16	4	0	38	0	7
119	124	PAGE SOUTHERLAND PAGE INC., Washington, D.C., U.S.A.	AE	45.8	32	92	8	0	0	0	0	0	0	0
120	116	ACCIONA INFRAESTRUCTURAS, Madrid, Spain <sup>†</sup>	EC	45.4	71	0	0	11	7	0	0	82	0	0
121	117	H.P. GAUFF INGENIEURE GMBH, Frankfurt am Main, Hessen, Germany <sup>†</sup>	EC	45.2	60	1	0	0	27	7	0	58	0	7
122	133	PADECO CO. LTD., Tokyo, Japan	EC	45.2	100	3	0	0	0	0	0	44	0	2
123	125	SHAKER GROUP, Dubai, U.A.E. <sup>†</sup>	EC	44.1	94	41	13	21	0	0	5	13	0	5
124	**	SAMOO ARCHITECTS & ENGINEERS, Seoul, S. Korea	AE	43.3	25	14	78	0	0	0	0	7	0	0
125	118	HOCHTIEF AKTIENGESELLSCHAFT, Essen, NRW, Germany <sup>†</sup>	EC	43.0	47	23	0	7	0	7	5	56	0	0
126	129	STANLEY CONSULTANTS INC., Muscatine, Iowa, U.S.A. <sup>†</sup>	EA	41.8	22	22	0	36	0	21	0	22	0	0
127	**	NJS CO. LTD., Tokyo, Japan <sup>†</sup>	EC	41.6	28	0	0	0	36	58	0	0	0	0
128	132	YACHIYO ENGINEERING CO. LTD., Tokyo, Japan	E	41.0	23	2	0	22	22	12	0	12	0	22
129	136	DEWAN ARCHITECTS + ENGINEERS, Abu Dhabi, U.A.E.	AE	39.1	76	100	0	0	0	0	0	0	0	0
130	115	POPULOUS, Kansas City, Mo., U.S.A. <sup>†</sup>	A	38.7	21	100	0	0	0	0	0	0	0	0
131	130	HKS, Dallas, Texas, U.S.A.	A	38.6	10	100	0	0	0	0	0	0	0	0
132	147	<b>TPF GETINSA PAYMA,</b> Madrid, Spain <sup>†</sup>	EC	38.5	63	10	0	0	7	3	0	80	0	0
133	137	GHAFARI ASSOCIATES, Dearborn, Mich., U.S.A.	EA	37.7	26	0	53	0	0	0	0	47	0	0
134	126	GEODATA ENGINEERING SPA, Torino, Italy <sup>†</sup>	E	36.7	94	0	0	0	37	8	0	56	0	0
135	138	ARCHITECTURE & PLANNING GROUP, Abu Dhabi, U.A.E.	AE	36.6	75	100	0	0	0	0	0	0	0	0
136	164	GANNETT FLEMING, Camp Hill, Pa., U.S.A.	EA	36.2	10	0	0	0	2	0	0	98	0	0
137	131	GEOSYNTEC CONSULTANTS INC., Atlanta, Ga., U.S.A. <sup>†</sup>	E	36.1	13	0	0	9	0	0	23	0	67	0
138	219	CHINA RAILWAY CONSTRUCTION CORP. LTD., Beijing, China $^{\dagger}$	EC	36.0	1	0	0	0	0	3	0	94	0	0
139	144	<b>JGC CORP.,</b> Yokohama, Japan <sup>†</sup>	EC	36.0	56	0	0	28	0	0	72	0	0	0
140	111	KLEINFELDER, San Diego, Calif., U.S.A. <sup>†</sup>	EA	35.0	12	9	3	2	5	0	77	0	2	0
141	106	CHINA HUANQIU CONTRACTING & ENGINEERING CORP. LTD., Beijing, China $^{\dagger}$	EC	34.9	15	0	0	0	0	0	100	0	0	0
142	**	TAUW GROUP, Deventer, The Netherlands	E/ENV	34.8	32	0	0	0	0	0	100	0	0	0
143	102	BURNS & MCDONNELL, Kansas City, Mo., U.S.A.	EAC	34.8	3	29	3	54	1	0	1	13	0	0
144	**	<b>KIEWIT CORP.,</b> Omaha, Neb., U.S.A. <sup>†</sup>	EC	34.6	9	0	0	99	0	0	0	0	1	0
145	146	TTCL PUBLIC CO. LTD., Bangkok, Thailand <sup>†</sup>	EC	34.0	63	0	0	6	26	0	68	0	0	0
146	141	CHODAI GROUP, Tokyo, Japan <sup>†</sup>	EC	33.5	15	4	0	4	0	2	0	81	0	0
147	134	PCG PROFABRIL CONSULPLANO GLOBAL SA, Lisbon, Portugal <sup>†</sup>	EC	32.1	79	13	0	0	5	5	35	42	0	0
148	**	CCDI GROUP, Shanghai, China	AE	30.6	12	0	0	0	0	0	0	0	0	0
149	**	WONG TUNG & PARTNERS LTD., Hong Kong, China <sup>†</sup>	A	28.9	70	100	0	0	0	0	0	0	0	0
150	212	CHINA METALLURGICAL GROUP CORP., Beijing, China <sup>†</sup>	EA	28.2	4	0	0	0	0	0	91	0	0	0
151	143	KUNHWA ENGINEERING & CONSULTING CO. LTD., Seoul, S. Korea	E	28.2	19	0	0	3	21	19	0	43	0	0
152	155	JAN DE NUL GROUP (SOFIDRA SA), Capellen, Luxemburg <sup>†</sup>	0	28.0	100	7	0	0	0	0	11	36	0	0
153	**	CHINA RAILWAY DESIGN CORP., Beijing, China <sup>†</sup>	EC	27.8	4	0	0	0	0	4	0	95	0	0



#93 JSTI GROUP is doing the preliminary design on the \$1.2-billion, 400-MW Rositas Dam & Hydroelectric power plant in Bolivia.

	.NK 2016	FIRM	FIRM TYPE	2016 INT'L IN \$ MIL	. <mark>REVENUE</mark> % OF TOTAL REV.	GENERAL	MANUFACTURE	POWER	MATER SUD	SEWER / W.S.	MDUS. , Dr.	TRANSPORT	HAZARDOULO	TELECOM
154	**		E	25.8	51	73	3	0	0	0	1		0	
	100	INTEGRAL GROUP, Oakland, Calif., U.S.A.			24	73 0	0	-	2	0		1	0	1
155	128	ECOLOGY AND ENVIRONMENT INC., Lancaster, N.Y., U.S.A. <sup>T</sup>	ENV	25.6				33	2		54	2		
156	4 7 4	SU YAPI ENGINNERING AND CONSULTING INC., Ankara, Turkey	EC	25.4	74	0	0	0		3	90		0	0
157	171		E	24.3	17	0	0	0	0	0	0	100	0	0
158	127		A	23.8	91	100	0	0	0	0	0	0	0	0
159	176		EC	23.5	14	0	0	5	30	0	0	61	0	0
160	189	SUNJIN ENGINEERING & ARCHITECTURE, Gyeonggi-do, S. Korea	EC	23.0	21	16	0	0	0	0	0	0	0	0
161	**	ARQUITECTONICA, Miami, Fla., U.S.A.	A	23.0	33	98	0	0	0	0	0	2	0	0
162	**	DAY & ZIMMERMANN, Philadelphia, Pa., U.S.A. <sup>†</sup>	AE	22.9	22	100	0	0	0	0	0	0	0	0
163	154	ARABTECH JARDANEH, Amman, Jordan <sup>†</sup>	EA	22.7	70	77	0	0	12	2	1	6	2	0
164	142		A	22.7	14	100	0	0	0	0	0	0	0	0
165	159		EA	22.1	21	0	0	0	0	0	100	0	0	0
166	145		E	21.9	30	0	0	100	0	0	0	0	0	0
167	160		EC	21.7	100	19	0	0	53	26	0	2	0	0
168	177		EA	21.0	75	20	0	0	0	0	0	80	0	0
169	139	CANNONDESIGN, Grand Island, N.Y., U.S.A.	AE	20.8	11	100	0	0	0	0	0	0	0	0
170	157	CONSOLIDATED CONSULTANTS GROUP, Amman, Jordan	AE	20.8	74	54	0	0	11	7	1	20	0	0
171	140	POWER ENGINEERS INC., Hailey, Idaho, U.S.A.	EA	20.8	5	0	0	96	0	0	4	0	0	0
172	167	KOREA ENGINEERING CONSULTANTS CORP., Seoul, S. Korea	EC	20.1	11	0	0	9	35	4	0	50	0	0
173	163	SHENYANG YUANDA ALUMINUM INDUS. ENG'G CO. LTD., Shenyang, China <sup>†</sup>	EC	19.5	64	100	0	0	0	0	0	0	0	0
174	166	<b>TATA CONSULTING ENGINEERS LTD.,</b> Mumbai, Maharashtra, India <sup>†</sup>	EC	19.5	40	0	0	75	4	0	12	0	0	0
175	165	SHELADIA ASSOCIATES INC., Rockville, Md., U.S.A.	EA	19.1	81	2	0	0	16	0	0	82	0	0
176	184	SETS, Beirut, Lebanon	EC	17.6	99	3	0	2	3	0	0	89	0	1
177	181	JENSEN HUGHES INC., Baltimore, Md., U.S.A. <sup>†</sup>	E	17.5	12	37	2	2	0	0	0	2	0	0
178	186	AMG AL AMAR CONSULTING GROUP SA, ${\sf Cairo}, {\sf Egypt}^{\dagger}$	EA	17.4	69	78	5	3	5	5	0	2	0	1
179	**	IRD ENGINEERING SRL, Rome, Italy	EC	16.5	98	14	0	0	4	0	0	82	0	0
180	156	KAJIMA CORP., Tokyo, Japan <sup>†</sup>	EAC	16.2	10	17	25	2	0	0	53	0	0	1
181	196	MERRICK & CO., Greenwood Village, Colo., U.S.A.	EA	16.0	13	53	16	6	0	0	0	0	0	0
182	**	NV5 GLOBAL INC., Hollywood, Fla., U.S.A. <sup>†</sup>	E	16.0	5	95	0	0	0	0	3	0	0	3
183	185	<b>SHAPOORJI PALLONJI AND CO. PVT. LTD.,</b> Mumbai, Maharashtra, India $^{\dagger}$	EC	14.2	68	100	0	0	0	0	0	0	0	0
184	218	LEIDOS, Reston, Va., U.S.A.	EA	14.1	2	0	50	50	0	0	0	0	0	0
185	203	ME ENGINEERS, Golden, Colo., U.S.A.	E	14.1	27	100	0	0	0	0	0	0	0	0
186	179	POSCO ENGINEERING & CONSTRUCTION, Incheon, S. Korea <sup>†</sup>	EC	13.8	43	2	0	0	0	0	77	21	0	0
187	198	SALFO AND ASSOCIATES SA, Athens, Greece <sup>†</sup>	EA	13.7	94	36	0	0	2	1	9	32	0	0
188	175	ROBERT A.M. STERN ARCHITECTS, New York, N.Y., U.S.A.	A	13.6	19	97	0	0	0	0	0	0	0	0
189	191	GP STRATEGIES, Columbia, Md., U.S.A.	E	13.1	38	0	0	0	0	0	0	0	0	0
190	**	PACIFIC CONSULTANTS CO. LTD., Tokyo, Japan	E	13.0	3	0	0	0	23	0	0	38	0	0
191	**	CHA CONSULTING INC., Albany, N.Y., U.S.A. <sup>†</sup>	EA	12.9	5	0	72	28	0	0	0	0	0	0
192	202	REBEL DESIGN+GROUP, Marina Del Rey, Calif., U.S.A.	A	12.8	50	100	0	0	0	0	0	0	0	0
193	197	STUDIOS ARCHITECTURE, Washington, D.C., U.S.A.	A	12.8	18	100	0	0	0	0	0	0	0	0
194	**	COBA - ENGINEERING & ENVIRONMENTAL CONSULTANTS, Lisbon, Portugal	EC	12.7	87	0	0	50	41	1	0	9	0	0
195	**	POND, Peachtree Corners, Ga., U.S.A.	AEC	12.6	12	0	0	0	0	0	100	0	0	0
196	**	KARN CHARUHAS CHAPMAN & TWOHEY (KCCT), Washington, D.C., U.S.A.	A	12.5	64	100	0	0	0	0	0	0	0	0
197	193	TEMELSU INTERNATIONAL ENGINEERING SERVICES INC., Ankara, Turkey	EC	12.3	50	0	0	4	3	14	0	35	0	0
198	**	HUSSEIN SABBOUR CONSULTANT BUREAU (HSCB), Cairo, Egypt	EC	12.0	24	70	0	5	8	14	0	0	0	3
199	201	CUNINGHAM GROUP ARCHITECTURE INC., Minneapolis, Minn., U.S.A.	A	11.4	16	100	0	0	0	0	0	0	0	0
200	153	WALDEMAR S. NELSON AND CO. INC., New Orleans, La., U.S.A.	EA	11.2	19	0	0	0	0	0	10	0	0	0
201	**	DAR AL OMRAN, Amman, Jordan <sup>†</sup>	AE	11.1	52	94	0	0	1	3	0	3	0	0
202	199		EA	11.0	24	0	0	0	0	0	0	36	0	64
202	200		EC	11.0	85	0	0	0	0	0	100	0	0	0
203		YANJIAN GROUP CO. LTD., Yantai, Shandong, China <sup>†</sup>	EC	10.8	100	100	0	0	0	0	0	0	0	0
		and a second sec	0	10.0	100	100	U	U	0	U	0	0	0	

#122 PADECO CO. LTD. is general consultant on the \$4-billion Mumbai Metro Line 3 project, the first fully underground rail line in India.

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RA 2017		FIRM	FIRM TYPE	2016 INT'L IN \$ MIL	. <mark>REVENUE</mark> % OF TOTAL REV.	GENERAL	MANUFACTION	POWER	WATER SILO	SEWER / WAL	INDUS. / Dr.	TRANSPORT	HAZARDOUS	TELECOM
205	190	GOETTSCH PARTNERS, Chicago, III., U.S.A.	A	10.6	43	100	0	0	0	0	0	0	0	0
206	**	STV GROUP INC., New York, N.Y., U.S.A. <sup>†</sup>	EA	10.6	3	0	0	0	0	0	0	100	0	0
207	**	HEERIM ARCHITECTS & PLANNERS CO. LTD., Seoul, S. Korea	AP	10.3	13	80	0	0	0	0	0	20	0	0
208	168	ZGF ARCHITECTS LLP, Portland, Ore., U.S.A.	A	10.3	7	93	0	0	0	0	0	1	0	0
209	209	YUKSEL PROJE ULUSLARARASI AS, Ankara, Turkey†	EA/GE	10.3	17	0	0	0	0	0	0	98	0	0
210	211	<b>ZAS ARCHITECTS INC.,</b> Dubai, U.A.E. <sup>†</sup>	A	10.2	55	100	0	0	0	0	0	0	0	0
211	192	LANGAN ENG'G, ENVIRO., SVYG. & LANDS. ARCH., Parsippany, N.J., U.S.A. $^{\dagger}$	E	10.1	4	90	0	0	0	0	0	10	0	0
212	**	DISTANCE STUDIO CONSULTANTS, Giza, Egypt	AE	10.1	97	97	0	0	0	0	3	0	0	0
213		ENERCON SERVICES INC., Kennesaw, Ga., U.S.A.	EA	10.0	4	0	0	100	0	0	0	0	0	0
214	187	ENGLOBAL, Houston, Texas, U.S.A.	E	10.0	15	0	0	0	0	0	100	0	0	0
215	195	SSOE GROUP, Toledo, Ohio, U.S.A. <sup>†</sup>	EA	9.7	7	3	82	0	0	0	16	0	0	0
216	180	AMBITECH ENGINEERING CORP., Downers Grove, III., U.S.A.	EC	9.5	8	0	0	0	0	0	100	0	0	0
217	**	SASAKI, Watertown, Mass., U.S.A.	EAL	9.3	15	100	0	0	0	0	0	0	0	0
218	188	SUMITOMO MITSUI CONSTRUCTION CO. LTD., Tokyo, Japan <sup>†</sup>	EC	9.1	82	0	57	0	0	0	0	43	0	0
219	205	MG2, Seattle, Wash., U.S.A.	A	9.1	19	100	0	0	0	0	0	0	0	0
220	207	ENGINEERING FOR PETROLEUM & PROCESS INDUS. "ENPPI", Cairo, Egypt $^{\dagger}$	EC	9.0	3	0	0	0	0	0	100	0	0	0
221	**	SHANGDONG DEJIAN GROUP CO. LTD., Dezhou City, Shandong, China	AE	8.7	83	100	0	0	0	0	0	0	0	0
222	**	CHINA STATE CONSTRUCTION ENGINEERING CORP. LTD., Beijing, China	AE	8.6	1	72	0	0	20	5	0	3	0	0
223	210	PYUNGHWA ENGINEERING CONSULTANTS LTD., Gyeonggi-do, S. Korea	E	8.2	19	0	0	2	2	1	0	95	0	0
224	208	TRC COS. INC., Lowell, Mass., U.S.A. <sup>†</sup>	E	8.2	1	0	0	7	0	0	21	37	35	0
225	214	ENGICON, Amman, Jordan	EAL	7.9	46	15	0	0	44	24	0	14	0	1

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## Where To Find the Top 225

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## The Top 150 List

RAI 2017		FIRM	Firm Type	2016 RE TOTAL \$ MIL.	VENUE INT'L \$ MIL.	GENERAL	MANUFACTION	BUING BUING	WATER SILDE	SEWER / WAS	MDUS. / PEC	TRANSPORTAL	HAZARDOUS	<sup>1ELECOM</sup>
1	1	AECOM, Los Angeles, Calif., U.S.A. <sup>†</sup>	EAC	7,430.0	3,410.0	20	0	7	7	4	2	40	18	0
2	2	POWER CONSTRUCTION CORP. OF CHINA, Beijing, China <sup>†</sup>	EC	7,300.5	1,090.6	0	0	94	1	0	0	0	0	2
3	3	JACOBS, Dallas, Texas, U.S.A.	EAC	6,387.3	2,946.0	13	2	3	2	1	38	22	15	2
4	**	CHINA ENERGY ENGINEERING CORP. LTD., Beijing, China <sup>†</sup>	EC	6,193.0	644.8	2	0	96	0	0	2	0	0	0
5	4	WSP, Montreal, Quebec, Canada <sup>†</sup>	EC	5,012.3	4,070.9	29	1	6	1	2	6	50	2	1
6	5	CHINA COMMUNICATIONS CONSTRUCTION GROUP LTD., Beijing, China <sup>†</sup>	EC	4,169.3	353.7	0	0	1	0	0	0	98	0	0
7	7	ARCADIS NV, Amsterdam, The Netherlands <sup>†</sup>	EC	3,715.0	3,369.0	36	1	3	8	2	3	9	16	0
8	8	CH2M, Englewood, Colo., U.S.A. <sup>†</sup>	E	3,551.2	1,309.3	0	5	0	14	19	14	33	15	0
9	9	FLUOR CORP., Irving, Texas, U.S.A. <sup>†</sup>	EC	3,293.6	2,071.4	0	2	3	0	0	85	0	10	0
10	19		A	3,020.5	2,071.4	22	0	8	15	16	11	21	2	1
11	11	WS ATKINS PLC, Epsom, Surrey, U.K. <sup>†</sup>	EA	2,828.2	1,553.3	26	1	19	6	0	2	47	0	0
12	6	WORLEYPARSONS, North Sydney, NSW, Australia	EC	2,672.0	-	1	0	11	0	0	78	47	1	0
	_		E	2,672.0	2,372.0 837.0	1	1	9	40	9	13	9	18	0
13 14	18		EC	,	36.0	26	4	9		9	0	9 61	0	0
	16	CHINA RAILWAY CONSTRUCTION CORP. LTD., Beijing, China <sup>†</sup>		2,594.0					4				0	1
15	15	DAR GROUP, Dubai, U.A.E. <sup>†</sup>	EA	2,275.2	2,275.2	49	0	3	2	3	4	39		0
16	14	CB&I LLC, The Woodlands, Texas, U.S.A. <sup>†</sup>	EC	2,217.0	625.7	0	0	10	1	0	82	2	3	
17	17	MOTT MACDONALD, Croydon, Surrey, U.K.T	EC	2,160.7	1,299.9	16 7	0	12	7	10	15	34	1	1
18	12		EC GE	2,009.8	883.9	12	0	28 9	1	0	30	19 4	0	3
19 20	13		EC	1,953.0	1,778.0 908.0	12	6	9 14	3	3	68 32	9	8	0
	10	AMEC FOSTER WHEELER, Atlanta, Ga., U.S.A.T	-	1,936.0										
21	27	SWECO AB, Stockholm, Sweden <sup>†</sup>	EA	1,932.0	1,199.0	34	2	9	4	5	9	33	1	0
22	21	HDR, Omaha, Neb., U.S.A. <sup>†</sup>	EA	1,927.6	169.0	21	0	10	10	10	1	46	1	0
23	35	KBR, Houston, Texas, U.S.A. <sup>†</sup>	EC	1,916.0	958.0	0	0	11	4	0	52	12	0	0
24	24	ARUP, London, U.K.†	E	1,776.3	1,220.6	39	3	4	2	2	5	38	1	2
25	23	CHINA RAILWAY GROUP LTD., Beijing, China <sup>†</sup>	EA	1,767.8	132.7	8	0	0	0	0	0	67	0	0
26	25	TECNICAS REUNIDAS, Madrid, Spain	EC	1,622.2	1,522.8	0	0	7	1	0	91	1	0	0
27	20	BECHTEL, San Francisco, Calif., U.S.A. <sup>†</sup>	EC	1,597.0	724.0	0	0	8	0	0	51	13	19	8
28	26	RAMBOLL GRUPPEN A/S, Copenhagen S, Denmark <sup>†</sup>	E	1,571.0	1,159.4	31	0	9	1	6	7	25	19	0
29	22	PARSONS, Pasadena, Calif., U.S.A. <sup>†</sup>	EC	1,508.0	450.0	5	0	0	3	1	1	71	14	3
30	31	BLACK & VEATCH, Overland Park, Kan., U.S.A. <sup>†</sup>	EC	1,378.7	408.2	3	0	47	17	13	7	0	1	11
31	29	BURNS & MCDONNELL, Kansas City, Mo., U.S.A.	EAC	1,306.0	34.8	5	3	55	2	4	16	9	4	1
32	32	AF GROUP, Stockholm, Sweden <sup>†</sup>	E	1,302.4	327.4	16	27	17	0	0	15	19	0	4
33	30	GHD, Sydney, NSW, Australia <sup>†</sup>	EA/ENV	1,229.8	739.3	21	0	3	14	9	6	22	15	0
34	37		E	1,195.9	584.6	18	5	14	0	1	53	6	2	1
35	34	GENSLER, San Francisco, Calif., U.S.A.	A	1,192.4	211.4	93	0	0	0	0	0	5	0	1
36	**	EGIS, Saint-Quentin-en-Yvelines, France <sup>†</sup>	EC	1,131.9	715.0	16	0	3	5	1	1	75	0	0
37	**	CHINA STATE CONSTRUCTION ENGINEERING CORP. LTD., Beijing, China	AE	1,103.5	8.6	71	0	0	6	10	0	13	0	0
38	42	HNTB COS., Kansas City, Mo., U.S.A.	EA	1,028.8	0.8	2	0	0	2	1	0	95	0	0
39	36	CARDNO LTD., Brisbane, Queensland, Australia <sup>†</sup>	EC	903.4	568.3	0	0	0	0	0	0	0	0	0
40	**	GOLDER ASSOCIATES CORP., Palm Beach Gardens, Fla., U.S.A. <sup>†</sup>	E	897.2	684.6	11	5	7	2	6	25	17	0	1
41	41	HYUNDAI ENGINEERING CO. LTD., Seoul, S. Korea	EC	861.3	748.0	4	3	17	1	3	68	3	0	0
42	46	COWI A/S, Kongens Lyngby, Denmark <sup>†</sup>	EC	842.1	576.9	22	0	0	5	10	0	51	1	0
43	**	TECHNIP, Paris, France <sup>†</sup>	EC	824.0	775.0	0	0	0	0	0	100	0	0	0
44	55	PETROFAC LTD., Jersey, Channel Islands, U.K. <sup>†</sup>	EC	803.0	803.0	0	0	0	0	0	100	0	0	0
45	69	SURBANA JURONG PRIVATE LTD., Singapore <sup>†</sup>	EC	781.0	498.0	47	0	8	4	0	1	36	2	0
46	33	HATCH LTD., Mississauga, Ontario, Canada <sup>†</sup>	EC	775.0	351.0	0	0	12	4	0	54	22	0	0
47	43	SINOPEC ENGINEERING (GROUP) CO. LTD., Beijing, China <sup>†</sup>	EC	735.0	157.4	0	0	0	0	0	100	0	0	0
48	48	AURECON, Melbourne, Victoria, Australia	EC	727.2	332.1	30	3	7	4	0	7	30	0	5
49	57	KIMLEY-HORN, Raleigh, N.C., U.S.A.	E	722.3	1.5	42	0	1	4	3	0	51	0	0
50	71	LEIDOS, Reston, Va., U.S.A.	EA	713.5	14.1	0	4	30	0	0	0	0	66	0



**CHINA ENERGY ENGINEERING CORP. LTD.** is the parent of several Chinese contractors and designers. It went public in November 2015.

RAI 2017		FIRM	FIRM TYPE	2016 RE TOTAL \$ MIL.	<mark>Venue</mark> INT'L \$ Mil.	GENERAL	MANUFACTION	POWER	WATER SUC	SEWER / M.	Mous, Jos	TRANSPORT	HAZARDOLIC .	TELECOM
51	47	SYSTRA, Paris, France <sup>†</sup>	EC	707.6	426.0	0	0	0	0	0	0	100	0	0
52	61	TRC COS. INC., Lowell, Mass., U.S.A. <sup>†</sup>	E	707.2	8.2	4	0	33	0	0	22	13	26	0
53	49	CDM SMITH, Boston, Mass., U.S.A. <sup>†</sup>	EC	691.5	139.5	2	0	2	20	33	1	25	17	0
54	64	NIPPON KOEI GROUP, Tokyo, Japan <sup>†</sup>	EC	666.6	227.3	1	0	4	13	7	0	36	0	3
55	50	ROYAL HASKONINGDHV, Amersfoort, The Netherlands <sup>†</sup>	EC	664.9	342.2	25	1	5	15	8	4	40	0	2
56	**	CHINA RAILWAY DESIGN CORP., Beijing, China <sup>†</sup>	EC	662.3	27.8	0	0	0	0	0	0	100	0	0
57	52	TRACTEBEL ENGINEERING SA, Brussels, Belgium <sup>†</sup>	EC	658.5	429.3	5	0	82	0	0	5	8	0	0
58	52 51		E		212.6	15	10	6	13	1	37	5	6	0
÷	_	BUREAU VERITAS, Fort Lauderdale, Fla., U.S.A.T		645.5										-
59	58	CHINA METALLURGICAL GROUP CORP., Beijing, China <sup>T</sup>	EA	637.4	28.2	16	0	6	0	0	50	9	15	0
60	54	LOUIS BERGER, Morristown, N.J., U.S.A.T	EAP	628.5	304.3	3	0	11	10	1	4	56	10	0
61	28	WOOD GROUP, Houston, Texas, U.S.A.†	EC	615.7	78.5	0	1	0	0	0	99	0	0	0
62	63	TERRACON CONSULTANTS INC., Olathe, Kan., U.S.A.T	E	602.5	1.9	41	2	9	3	2	5	13	17	2
63	99	SENER INGENIERIA Y SISTEMAS SA, Las Arenas (Getxo), Vizcaya, Spain <sup>†</sup>	EA	600.5	580.5	0	0	71	0	0	4	25	0	0
64	67	LARSEN & TOUBRO LTD., Mumbai, Maharashtra, India <sup>†</sup>	EC	600.3	497.5	5	68	2	0	0	17	8	0	0
65	59	CHINA NATIONAL MACHINERY INDUSTRY CORP., Beijing, China <sup>†</sup>	EC	591.2	168.2	31	12	35	3	1	7	5	1	0
66	56	POYRY, Vantaa, Finland <sup>†</sup>	E	586.0	458.0	2	0	37	2	3	34	11	5	0
67	65	MAIRE TECNIMONT GROUP, Milan, Italy <sup>†</sup>	EC	537.8	450.5	1	0	5	0	0	92	2	0	0
68	68	MICHAEL BAKER INTERNATIONAL, Pittsburgh, Pa., U.S.A. <sup>†</sup>	EA	534.6	2.2	22	0	0	17	0	5	49	4	2
69	53	S&B ENGINEERS AND CONSTRUCTORS LTD., Houston, Texas, U.S.A. <sup>†</sup>	EC	533.8	0.0	0	0	0	0	0	98	2	0	0
70	66	ARCPLUS GROUP PLC, Shanghai, China <sup>†</sup>	AE	507.4	55.0	100	0	0	0	0	0	0	0	0
71	78	EXP US SERVICES INC., Chicago, III., U.S.A.	E	470.0	285.3	40	0	2	3	4	9	15	0	6
72	62	SARGENT & LUNDY LLC, Chicago, III., U.S.A. <sup>†</sup>	E	466.8	57.3	0	0	100	0	0	0	0	0	0
73	72	KHATIB & ALAMI, Beirut, Lebanon <sup>†</sup>	EA	455.9	441.0	51	0	3	13	6	2	15	0	0
74	60	CDI CORP., Philadelphia, Pa., U.S.A. <sup>†</sup>	EA	452.3	119.5	9	10	10	0	0	58	10	0	1
75	98	JSTI GROUP, Nanjing, Jiangsu, China <sup>†</sup>	EC	447.5	105.5	1	0	1	3	16	0	76	0	0
76	105	CHINA PETROLEUM ENGINEERING & CONSTRUCTION CORP., Beijing, China <sup>†</sup>	EC	440.9	219.0	0	0	0	0	0	100	0	0	0
77	74	ARTELIA, Lyon, France <sup>†</sup>	EC	431.0	145.7	41	2	3	11	5	12	23	2	0
78	73	HOK, St. Louis, Mo., U.S.A.	AE	430.0	105.9	87	0	0	0	0	0	13	0	0
79	**	TONGJI ARCHITECTURAL DESIGN (GROUP) CO. LTD., Shanghai, China <sup>†</sup>	A	426.8	1.6	76	2	0	1	2	0	15	0	1
80	96	ORIENTAL CONSULTANTS GLOBAL (ACKG LTD.), Tokyo, Japan <sup>†</sup>	EC	424.1	128.5	3	0	0	7	4	0	61	0	0
81	79	STV GROUP INC., New York, N.Y., U.S.A. <sup>†</sup>	EA	414.3	10.6	16	0	0	0	0	0	84	0	0
82	81	KIEWIT CORP., Omaha, Neb., U.S.A. <sup>†</sup>	EC	402.0	34.6	0	0	81	1	0	15	0	3	0
83	80		EA	398.7	20.8	0	0	89	0	0	8	0	0	3
03	76	POWER ENGINEERS INC., Hailey, Idaho, U.S.A. KEPCO ENG'G & CONSTRUCTION CO. INC., Gyeongsangbuk-do, S. Korea	AE	388.0	106.2	0	0	99	0	0	0	0	1	0
04	_		E	383.0		4	0	0	17	9	1	50	0	1
85	90	PACIFIC CONSULTANTS CO. LTD., Tokyo, Japan			13.0									
86	82	HKS, Dallas, Texas, U.S.A.	A	376.7	38.6	100	0	0	15	0	0	0	0	0
87	84	DEWBERRY, Fairfax, Va., U.S.A.T	EA	375.0	2.8	39	0	4	15	6	0	32	1	3
88	91	BECA GROUP LTD., Auckland, New Zealand <sup>†</sup>	EA	373.2	116.8	26	10	4	9	0	8	34	0	1
89	86	BROWN AND CALDWELL, Walnut Creek, Calif., U.S.A. <sup>†</sup>	E	362.0	0.0	0	0	0	22	52	0	0	26	0
90	**	IBI GROUP, Westerville, Ohio, U.S.A. <sup>†</sup>	AE	358.3	238.8	67	9	2	2	2	0	15	0	0
91	**	BEIJING URBAN CONSTRUCTION GROUP CO. LTD., Beijing, China <sup>†</sup>	EC	352.9	0.0	2	0	0	0	0	0	98	0	0
92	94	GANNETT FLEMING, Camp Hill, Pa., U.S.A.	EA	351.5	36.2	4	0	6	13	4	3	68	3	0
93	83	SKIDMORE, OWINGS & MERRILL LLP, New York, N.Y., U.S.A. <sup>†</sup>	AE	339.9	141.0	87	0	0	0	0	0	13	0	0
94	89	ASSYSTEM, Paris, France <sup>†</sup>	EC	328.0	108.0	8	3	69	1	0	8	5	3	2
95	**	SAIPEM SPA, San Donato Milanese, Italy	EC	320.0	124.0	0	0	0	0	8	58	34	0	0
96	85	OPUS INTERNATIONAL CONSULTANTS LTD., Wellington, New Zealand $^{\dagger}$	E	317.9	131.3	29	0	0	6	6	6	53	0	0
97	97	FICHTNER GROUP, Stuttgart, Germany <sup>†</sup>	EC	311.0	194.7	0	2	85	6	6	0	1	0	0
98	110	SHANGHAI URBAN CONSTRUCTION (GROUP) CORP., Shanghai, China <sup>†</sup>	EC	305.8	0.0	6	0	0	11	16	0	64	0	0
99	95	AEGION CORP., Chesterfield, Mo., U.S.A.	EC	304.0	124.0	3	0	1	0	14	78	3	0	0
100	141	NV5 GLOBAL INC., Hollywood, Fla., U.S.A. <sup>†</sup>	E	301.6	16.0	44	0	19	5	2	2	20	8	1

**CHINA CHENGDA ENGINEERING CO. LTD.** is designing and building a 1000-MW supercritical coal-fired power plant in Cilacap, Indonesia.

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RA 2017		FIRM	FIRM TYPE	2016 RE TOTAL \$ MIL.	VENUE INT'L \$ MIL.	GENERAL	MANUFACTION	POWER	WATER SILL	SEWER / WAS	MDUS. , Dr.	TRANSPORT	HAZARDOLIC	TELECOM
101	103	SETEC, Paris, France <sup>†</sup>	EC	289.5	63.4	12	10	1	7	4	0	64	0	2
102	93	KLEINFELDER, San Diego, Calif., U.S.A. <sup>†</sup>	EA	284.0	35.0	10	2	12	9	16	26	21	2	1
102	**	CHINA CHENGDA ENGINEERING CO. LTD., Chengdu, Sichuan, China	EC	281.9	141.3	0	0	47	0	0	53	0	0	0
104	104	GEOSYNTEC CONSULTANTS INC., Atlanta, Ga., U.S.A. <sup>†</sup>	E	276.4	36.1	0	0	12	4	19	9	2	52	0
105	**	ENGINEERING FOR PETROLEUM & PROCESS INDUS. "ENPPI", Cairo, Egypt <sup>†</sup>	EC	271.5	9.0	0	0	0	0	0	100	0	0	0
106	112		E	270.2	0.0	9	0	3	1	1	1	81	0	0
107	**	WL MEINHARDT GROUP PTY. LTD., Melbourne, Victoria, Australia <sup>†</sup>	EC	269.5	246.2	69	4	0	1	7	1	15	0	2
108	**	CCDI GROUP, Shanghai, China	AE	264.0	30.6	0	0	0	0	0	0	0	0	0
109	121	DOHWA ENGINEERING CO. LTD., Seoul, S. Korea	EC	259.8	64.1	2	0	17	20	15	0	25	0	0
110	101		EA	253.5	10.0	0	0	98	0	0	2	0	0	0
111	107	TECNICA Y PROYECTOS SA (TYPSA), Madrid, Spain <sup>†</sup>	EA	249.0	215.0	18	0	8	13	7	0	50	0	0
112	127	CAROLLO ENGINEERS INC., Walnut Creek, Calif., U.S.A.	E	247.6	0.0	0	0	0	61	39	0	0	0	0
113	118	LANGAN ENG'G, ENVIRO., SVYG. & LANDS. ARCH., Parsippany, N.J., U.S.A. <sup>†</sup>	E	245.0	10.1	47	0	5	0	0	10	10	29	0
114	114	IDOM, Bilbao, Vizcaya, Spain	EA	244.0	195.2	10	4	29	2	3	22	27	0	3
115	116		EA	241.0	12.9	28	25	13	1	4	6	21	2	0
116	117	THORNTON TOMASETTI INC., New York, N.Y., U.S.A.	EA	240.0	48.3	84	0	0	0	0	0	14	0	1
117	122	SMITHGROUPJJR, Detroit, Mich., U.S.A.	AE	235.9	5.4	100	0	0	0	0	0	0	0	0
118	131	JOHNSON, MIRMIRAN & THOMPSON INC., Hunt Valley, Md., U.S.A.	EA	233.5	0.0	7	0	0	0	5	0	88	0	0
119	109	GULF INTERSTATE ENGINEERING CO., Houston, Texas, U.S.A. <sup>†</sup>	EC	234.5	1.5	0	0	0	0	0	100	00	0	0
120	119	CHINA HUANQIU CONTRACTING & ENGINEERING CORP. LTD., Beijing, China <sup>†</sup>	EC	231.0	34.9	0	0	0	0	0	100	0	0	0
121	**	CHINA ALUMINUM INTERNATIONAL ENGINEERING CORP., Beijing, China <sup>†</sup>	EA	231.0	56.8	22	0	0	11	1	51	0	0	0
122	124		EC	228.3	49.2	28	18	0	3	0	0	51	0	0
122	113	ILF CONSULTING ENGINEERS, Rum/Innsbruck, Austria <sup>†</sup>	EC	223.3	187.1	4	0	11	18	3	40	21	0	0
123	115	CHODAI GROUP, Tokyo, Japan <sup>†</sup>	EC	223.1	33.5	4	0	4	0	2	0	81	0	0
124	140	HAZEN AND SAWYER, New York, N.Y., U.S.A.	E	218.0	5.6	0	0	0	31	69	0	0	0	0
125	147	CTCI CORP., Taipei, Taiwan <sup>†</sup>	EC	217.6	139.8	1	1	14	0	1	79	5	1	0
120	125	INGENIERIA Y ECONOMIA DEL TRANSPORTE SME MP SA, Madrid, Spain <sup>†</sup>	EC	217.0	57.7	0	0	0	0	0	0	100	0	0
128	106	ZACHRY GROUP, San Antonio, Texas, U.S.A. <sup>†</sup>	EC	217.0	0.3	0	0	85	0	0	14	0	0	0
120	133	PERKINS EASTMAN, New York, N.Y., U.S.A. <sup>†</sup>	A	215.0	60.2	100	0	0	0	0	0	0	0	0
130	128	TRANSYSTEMS, Kansas City, Mo., U.S.A.	E	212.5	0.0	0	0	0	0	0	0	100	0	0
131	138	RS&H INC., Jacksonville, Fla., U.S.A. <sup>†</sup>	EA	212.5	0.0	7	9	0	0	0	0	84	0	0
132	136	VHB, Watertown, Mass., U.S.A.	E	209.6	0.0	26	0	10	0	1	0	58	1	1
133	**	WILLDAN GROUP INC., Anaheim, Calif., U.S.A.	E	209.0	0.0	50	0	17	0	0	0	18	0	7
	143	HARGROVE ENGINEERS + CONSTRUCTORS, Mobile, Ala., U.S.A. <sup>†</sup>	E	203.0	0.0	0	1	12	0	0	87	0	0	0
134 135	**	WOODARD & CURRAN, Portland, Maine, U.S.A.	ENV	207.2	0.0	2	2	5	18	38	12	1	21	0
136	145	KCI TECHNOLOGIES INC., Sparks, Md., U.S.A. <sup>†</sup>	EC	205.0	0.0	14	0	8	5	5	0	48	1	16
137	132	PM GROUP, Dublin, Ireland <sup>†</sup>	EA	203.7	104.4	2	6	3	0	0	80	40 0	0	5
138	135	RUMMEL, KLEPPER & KAHL LLP, Baltimore, Md., U.S.A.	E	199.1	0.0	2	0	0	3	9	2	85	0	0
139	111	TEBODIN BV, The Hague, The Netherlands	E	199.0	107.0	5	10	8	1	1	74	0	0	0
140	130	DORSCH HOLDING GMBH, Frankfurt, Germany <sup>†</sup>	EC	198.4	194.7	5	0	8	38	21	0	25	0	1
141	**	CORGAN, Dallas, Texas, U.S.A.	A	198.3	1.8	35	0	0	0	0	0	45	0	20
141	**	FIRST SURVEY & DESIGN INSTITUTE OF RAILWAY, Xiían, Shaanxi, China <sup>†</sup>	EC	195.8	0.0	0	0	0	0	0	0	100	0	0
143	**	AEDAS, Hong Kong, China	A	193.4	189.3	82	0	0	0	0	0	18	0	0
143	139		EA	193.4	41.8	02 9	0	43	8	6	0	34	0	0
144	108	CHIYODA CORP., Yokohama, Kanagawa, Japan <sup>†</sup>	EC	192.0	142.9	9	1	43 6	0 0	0	68		0	0
145	148	KOREA ENGINEERING CONSULTANTS CORP., Seoul, S. Korea	EC	189.1	20.1	0	0	24	19	21	0	19	0	0
140	140	CANNONDESIGN, Grand Island, N.Y., U.S.A.	AE	185.5	20.1	100	0	24	0	0	0	0	0	0
147	120 <u>**</u>	POPULOUS, Kansas City, Mo., U.S.A. <sup>†</sup>	AE	185.5	38.7	100	0	0	0	0	0	0	0	0
	142		EC	184.7	124.6	5	0	4	21	6	12	44	0	4
149	14Z													
150		ECS, Chantilly, Va., U.S.A.†	E	183.6	1.7	28	7	4	2	15	2	10	17	1

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## Where To Find the Top 150

FIRM	RANK	FIRM	RANK	FIRM	RANK	FIRM	RANK
A		CTCI Corp.	126	JSTI Group	75	Sargent & Lundy LLC	72
						Sener Ingenierla y Sistemas SA	63
AECOM	1	D		K		Setec	101
Aedas	143	Dar Group	15	KBR	23	Shanghai Urban Construction (Group) Corp.	98
Aegion Corp.	99	Dewberry	87	KCI Technologies Inc.	136	Sinopec Engineering (Group) Co. Ltd.	47
AF Group	32	Dohwa Engineering Co. Ltd.	109	KEPCO Engineering & Construction Co. Inc.	84	Skidmore, Owings & Merrill LLP	93
Amec Foster Wheeler	20	Dorsch Holding GmbH	140	Khatib & Alami	73	SmithGroupJJR	117
Arcadis NV	7			Kiewit Corp.	82	SNC-Lavalin Inc.	18
Arcplus Group PLC	70	E		Kimley-Horn	49	Stanley Consultants Inc.	144
Artelia	77			Kleinfelder	102	Stantec Inc.	10
Arup	24	ECS	150	Korea Engineering Consultants Corp.	146	STV Group Inc.	81
Assystem	94	Egis	36			Surbana Jurong Private Ltd.	45
WS Atkins plc	11	Enercon Services Inc.	110	1		Sweco AB	21
Aurecon	48	Engineering for the Petroleum & Process		<u> </u>		Systra	51
Ayesa	149	Industries "Enppi"	105	Langan Eng'g, Enviro., Surveying &		Systia	51
		exp US Services Inc.	71	Landscape Arch.	113		
D				Larsen & Toubro Ltd.	64	T	
B		F		Leidos	50	Tebodin BV	139
Michael Baker International	68					Technip	43
Beca Group Ltd.	88	Fichtner Group	97	Μ		Tecnica y Proyectos SA (TYPSA)	111
Bechtel	27	First Survey & Design Institute of Railway	142			Tecnicas Reunidas	26
Beijing Urban Construction Group Co. Ltd.	91	Fluor Corp.	9	Maire Tecnimont Group	67	Terracon Consultants Inc.	62
Louis Berger	60	Fugro NV	19	WL Meinhardt Group Pty. Ltd.	107	Tetra Tech Inc.	13
Black & Veatch	30			Mott MacDonald	17	Thornton Tomasetti Inc.	116
Brown and Caldwell	89	G					
Bureau Veritas	58			Ν		Tongji Architectural Design (Group) Co. Ltd.	79
Burns & McDonnell	31	Gannett Fleming	92			Tractebel Engineering SA	57
		Gensler	35	Nippon Koei Group	54	TranSystems	130
$\sim$		Geosyntec Consultants Inc.	104	NV5 Global Inc.	100	TRC Cos. Inc.	52
<u>C</u>		GHD	33				
CannonDesign	147	Golder Associates Corp.	40	0		V	
Cardno Ltd.	39	Greenman-Pedersen Inc. (GPI)	106	Opus International Consultants Ltd.	96	 VHB	132
Carollo Engineers Inc.	112	Gulf Interstate Engineering Co.	119	Oriental Consultants Global (ACKG Ltd.)	80		102
CB&I LLC	16			ononial concentance chosen (nonce Etc.)	00		
CCDI Group	108	Н		_		W	
CDI Corp.	74	Hargrove Engineers + Constructors	134	Р		Willdan Group Inc.	133
CDM Smith	53	Hatch Ltd.	46	Pacific Consultants Co. Ltd.	85	Wood Group	61
CH2M	8	Hazen and Sawyer		Parsons	29	Woodard & Curran	135
CHA Consulting Inc.	115	· · · · · · · · · · · · · · · · · · ·	125	Perkins Eastman	129	WorleyParsons	12
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