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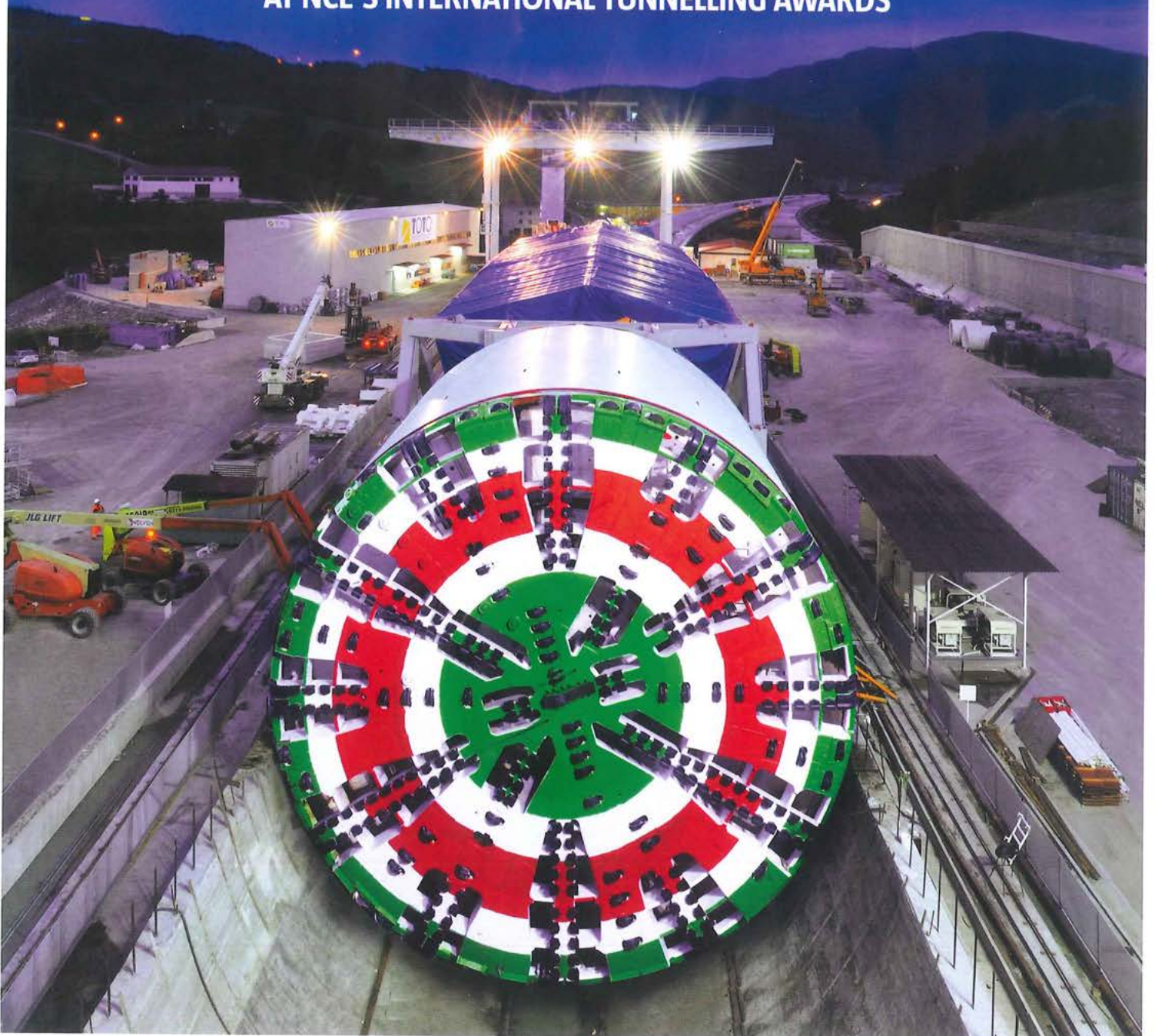
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IT'S A REAL ITALIAN JOB

RECORD BREAKING SPARVO TUNNEL SWEEPS THE BOARD
AT NCE'S INTERNATIONAL TUNNELLING AWARDS



NEWS

GEOTECHNICAL

Italians sweep the board at the International Tunnelling Awards

Record breaking project sets safety and collaboration standard.

By Mark Hansford

Italian contractor Toto Costruzioni Generali was the big winner at last week's *NCE* International Tunnelling Awards, claiming two prizes for its work on the Sparvo tunnel on the Variante di Valico A1 motorway project.

Toto was named tunnelling contractor of the year and also picked up the gong for tunnelling project of the year for projects worth up to \$500M (£305M).

Its client Autostrade per L'Italia also picked up the client of the year award.

The project broke records for the size of the tunnel and for the progress achieved.

Toto completed twin 2.5km long, 15.62m diameter tunnels in just 20 months. Breakthrough on the second bore was in July.

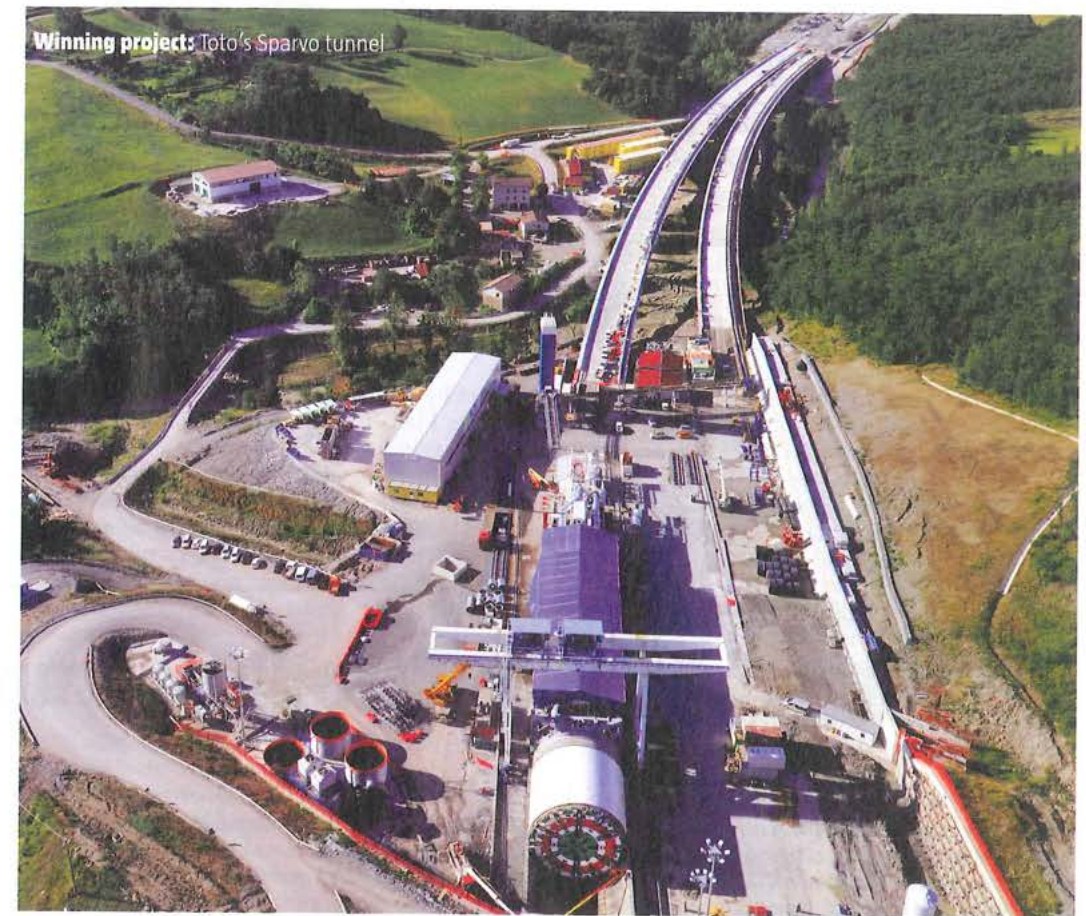
To ensure a high level of occupational safety and speedy tunnelling performance, the contractor opted for a Herrenknecht earth pressure balance tunnel boring machine with a shield diameter of 15.55m, a world record at that time.

The entire machine was explosion-proof to cope with the expected gaseous soils.

It included a double-walled encased tunnel belt conveyor that was additionally pressurised. There was also an efficient ventilation system.

The judges said success on the project came from a "truly joint approach" by the client, contractor, designer and all other stakeholders.

"The use of innovative solu-



tions, attention to detail around planning and risk management and the engagement of staff and stakeholders makes this an exemplar of how to deliver a complex tunnelling project," they said.

Of Toto, the judges said it had demonstrated "sustained success" through "the application of innovative techniques to cope with some very difficult tunnelling environments".

"They are well organised, highly experienced and for clients provide very reliable solutions," they said.

The judges added that Autostrade per L'Italia had set new standards for the way an intelligent client should behave.

"By engaging and working closely with the entire supply chain, it has delivered a series of highly complex underground

HS2: COLLABORATION VITAL

Treasury body Infrastructure UK's aim to make time savings of 50% and cut costs by 30% on the High Speed 2 would only be achieved if the industry works in a truly collaborative way said project promoter HS2 Ltd chairman Doug Oakervee.

Oakervee was speaking at the

projects and created world class infrastructure for the benefit of the public," they said.

Toto Costruzioni Generali president and chief executive Alfonso Toto said that success was down to the ability and expertise of the technicians who drove and managed this machine.

The TBM and its 106 oper-

NCE International Tunnelling Awards, which sought to recognise excellence in project delivery.

"If the project follows business as usual it will be a failure," he said. "We have to change our culture as an industry."

Oakervee said a truly collaborative working environment was essential to project success.

ators worked uninterruptedly 24 hours a day, seven days a week to excavate the tunnel and mount the lining segments in record time.

The tunnel is part of a new two lane motorway connecting Florence and Bologna.

■ Find out about all the winners on p18

GEOTECHNICAL: INTERNATIONAL TUNNELLING AWARDS

AWARDS AND THEIR WINNERS



NCE OAITES
INTERNATIONAL TUNNELLING AWARDS 2013

YOUNG TUNNELLER OF THE YEAR

Winner: Michael Cash, Southland Contracting and Tutor Perini Joint Venture

TUNNELLING CONTRACTOR OF THE YEAR

Winner: TOTO Costruzioni Generali

ENVIRONMENTAL INITIATIVE OF THE YEAR

Winner: National Grid,

Costain, Skanska, Halcrow, VVB, Arup and Mott MacDonald working in partnership on the London Power Tunnels

SAFETY INITIATIVE OF THE YEAR

Winner: MineARC Systems, Emergency Refuge Chambers Technical Innovation of the Year

TECHNICAL INNOVATION OF THE YEAR

Winner: Traylor Bros. and CH2M Hill Halcrow, Blue Plains Tunnel: Shaft Design and Construction

LIFETIME ACHIEVEMENT AWARD

Winner: Mohamed Elhosseiny Abdel Salam, Egyptian Tunnelling Society

PRODUCT OR EQUIPMENT INNOVATION OF THE YEAR

Winner: CSM BESSAC / Bouygues, Tunnel Dismantling Machine – Extension of the West Island Line, Package 703, Hong Kong

TUNNELLING CLIENT OF THE YEAR

Winner: Autostrade per l'Italia

INNOVATIVE USE OF BIM/DESIGN SOFTWARE

Winner: Parsons Brinckerhoff, Alaskan Way Viaduct Replacement Program

GROUND INVESTIGATION AND MONITORING AWARD

Winner: Ramboll Arup Joint Venture, Fehmarnbelt Fixed Link, Geotechnical Services

TUNNELLING DESIGN FIRM OF THE YEAR

Winner: CH2M Hill Halcrow

SPECIALIST TUNNELLING PROJECT OF THE YEAR

Winner: Strukton Civiel, Metro Station Amsterdam Central Station North-South Line

TUNNELLING PROJECT OF THE YEAR (UP TO \$500M)

Winner: TOTO Costruzioni Generali, Sparvo Tunnel Project "Variante di Valico" A1 Motorway

MAJOR TUNNELLING PROJECT OF THE YEAR (OVER \$500M)

Winner: Transcity Joint Venture, Legacy Way Tunnel, Brisbane, Australia.



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NCE TUNNELLING 2013

» industry. "We are convinced that we have a great future," he said. "Here in London, the tunnelling industry is booming. It is the same in many cities around the world.

"It is booming because governments see the clear need for infrastructure and because they recognise that the international tunnelling community can deliver it, on time and budget," said awards host NCE interim editor Mark Hansford.

"This year we have rewarded some fantastic projects and people. And that's crucial, because in this industry skilled, experienced people are everything. It is the same the world over, as cities seek to expand and support their populations. Because as we all know, in this industry skilled, experienced people are everything."

■ **Congratulations to the winners and finalists. More photos of the awards at www.tunnellingawards.com**

INNOVATIVE USE OF BIM/DESIGN SOFTWARE AWARD SPONSORED BY GEODATA

Parsons Brinckerhoff scooped this award for its Alaskan Way viaduct replacement programme. This major tunnelling project achieved huge cost savings across the design and construction process through use of an integrated digital model.

The whole project team benefited from good communication and increased data management leading to a huge cost, time and safety benefits, said our judges.

Award sponsor Geodata Group's head of department, software and systems explains the importance of BIM in tunnelling:

"To understand the importance of the use of innovative BIM/design software in a project is the first step to success.

"BIM and design software have to be used during the whole life cycle of a project, from design

stage, during construction and also during the operational phase of a project and are effective tools for constructability analysis, estimation and managing project costs, design validation and review, design collaboration and multi-disciplinary management, on-site coordination and are the central source for information and knowledge.

"A state of the art design, established by the use of innovative design software based on information provided in a BIM model, makes a project more cost effective, safe and sustainable. Having the design drawings available in 3D or a full 3D model of the construction enables the field personnel to have access to the design drawings and can report and comment direct from site about construction progress or any required changes or ask

specific questions, what leads to shorter ways of communication and a more efficient work flow.

"Using this information enables other fields to display and present their results in context with the information from BIM and the design information, like design limits for instrumentation and monitoring.

"Therefore it is essential to establish interfaces between any information systems used on site and integrate the data from design to these systems. As the amount of data and information will continue growing fast, a tool which helps putting the focus on the important information is essential."


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