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Dragages Singapore Pte Ltd

“Special formwork, cantilever platform and precast system on site”

Key Features:

- Dragages designed the superstructure framing in Reinforced Concrete (RC) shear walls as part of systematic and standardised construction cycle to maximise the speed of RC construction.
- Special formwork system and extensive use of precast components, such as RC planter boxes, RC ledges, precast slabs, beams and staircase were used on site. Although initial investment into metal formwork system was expensive, repeated usage of the system justified the investment.
- Systematic planning and site control were the main reasons for the success in achieving high productivity level and quality.



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Arbeit Sicher Pte. Ltd.

“TeMP System - Cantilever working platform and temporary access frame for lift installation”

Key Features:

- The conventional method of hoist-way access for installation and maintenance work in lift shafts is by using traditional metal frame scaffolds. Arbeit Sicher improved on the conventional scaffold system by decreasing the number of scaffold parts and this resulted in the reduction of set up time. The builder can use this system at any building floor to carry out the required work.
- Using a 20 storey building as a measurement benchmark, the new method reduced the elevator installation time from 1,500 manhours to 1,000 man-hours.



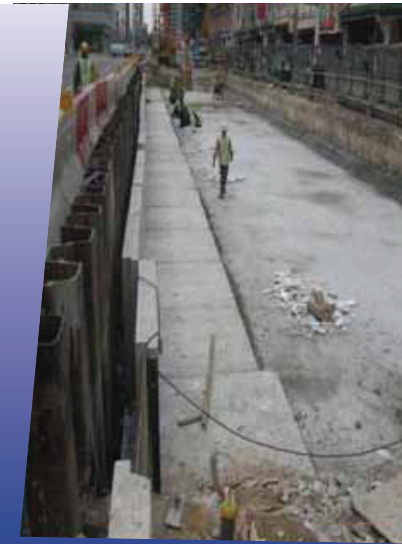
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Gammon Construction Limited Singapore Branch

“Usage of the precast retaining wall to expedite the construction of Chinatown station & tunnels roof slabs for Down Town Line Phase 1”

Key Features:

- To tackle the challenges of building in a highly built-up environment with congested traffic conditions, an alternative construction method of construction for the tunnel roof slabs which involved the use of precast ground retaining wall to facilitate tunnel roof slab construction was adopted.
- This alternative construction method was able to reduce the traffic diversion from three to two stages and the roof slab construction time was reduced from 120 days to 77 days. This minimised traffic disturbance to the road users.





OSK Engineering Pte Ltd

“Adoption of flexible compression mechanical piping system for hot and cold plumbing work”

Key Features:

- OSK Engineering invested in flexible piping technology to improve productivity for its plumbing, sanitary and gas work installation works and reduce its reliance on the transient foreign workforce.
- Easy installation of piping joints, combined with proper manpower management led to higher productivity level. The new method improved productivity from 1.5 man days/m² to 0.75 man days/m².
- Higher skilled workers can then be reassigned to handle difficult jobs.
- Use of such flexible piping system also reduce storage space requirements.



Gammon Pte. Limited

“Pipe Work Modularisation”

Key Features:

- Gammon prefabricated the piping for the mechanical services and chilled water tower off-site, and installation began immediately after the roof had been constructed.
- Through proper planning, Gammon was able to improve the productivity of the mechanical services installation and achieve the project deadline. Mechanical services installation time for this project was reduced from 22 weeks to 16 weeks.



Ssangyong Engineering & Construction Co., Ltd

“Hoisting and installation system of prefabricated bath unit (The Oceanfront @ Sentosa Cove)”

Key Features:

- Ssangyong Engineering & Construction developed a unique system of hoisting and installation of prefabricated bath units for “The Oceanfront @ Sentosa Cove” project to improve construction productivity.
- Roller devices were modified to transport prefabricated bathrooms for installation purposes. The new improved method reduced the installation timeline from 10 months to 8 months.

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Gammon Pte. Limited

“Positioning device developed at “Mole” project for rock probing”

Key Features:

- Gammon was awarded the contract to remove underground obstacles at the Marina Bay area. To ensure that the underground obstacles were completely removed, Gammon mounted Global Positioning System (GPS) devices onto dredgers to keep track of the dredging operations. Dredgers’ movement can then be continuously tracked on computers.
- The usage of GPS devices on the dredger improved the dredging precision. Dredgers fitted with GPS devices achieved standard deviation of 90 millimetres, which is very precise for civil engineering work. This reduced re-work and improved productivity.



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Deluge Fire Protection (SEA) Pte Ltd

“Best practices for sprinkler dropper installation”

Key Features:

- Deluge Fire Protection came up with an innovative method of installing sprinklers to meet the tight work schedule and quality requirements for the construction of the Marina Bay Sands Integrated Resort Hotel Towers. To overcome the various challenges, Deluge incorporated laser technology into the installation process, which resulted in higher productivity level and better precision.
- Re-engineering of this work processes led to on-site manpower reduction and higher productivity level. This translated to monetary savings for the company.



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China Jingye Engineering Corporation Limited (Singapore Branch)

“Energy saving acoustic light weight external wall system for steel structural building”

Key Features:

- Special lightweight wall panels were designed and used to meet the tight timeline for the construction of Universal Studios Singapore. These wall panels (known as ACL panels) have secured patent in China.
- Prefabrication of the wall panels off-site enabled the company to reduce the installation time from 8 months to 1.25 months.

