List of Major Projects

List of Projects Reference



Etihad Railway



Dubai Metro



Riyadh Metro



Haramain High-Speed



Makkah First Ring Road



Saudi Railway

List of Projects Reference



Diriyah Gate Infrastructure



King Salaman Park –
Roads & Tunnels



Qiddiya Project –
Roads & Tunnels



The Line Projects – Utility
Tunnel



Diriyah Super Basment –
Roads & Tunnels



Masar Project –
Roads & Tunnels

List of Projects Reference



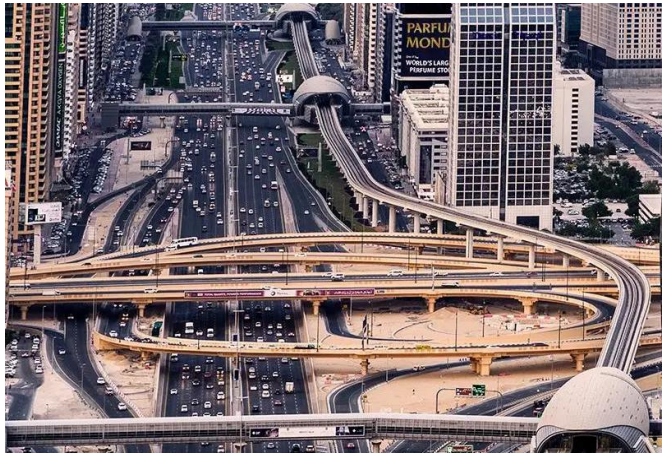
EXPO City 2020
- Rods & Tunnels



Sheikh Zayed Bridge



AL Saada Bridge



General Roards/Tunnels –
Dubai



Rua AL Madinah –
Roads & Tunnels



KAIA Airport –
Roads & Tunnels

List of Major Applications



References

Project: Makkah First Ring Road

	Challenge	Solution
	Highly public road serving the people visiting Holy Mosque in Makkah, its 6 km long consist of 6 bridges and 3 tunnels. For first time in KSA for safety issues they designed the bridges to have fire hydrant to be used in case of fire. Challenge was they used a double T slab where drilling was not allowed, and we have limitation to fix the supports system to carry the fire pipes	Fischer proposed heavy duty grid system using FUS system with accessories to fix the piping system, to make sure the installation done on high level we agreed to have weekly pull-out test randomly for all installed anchors.   

Application: Fire Hydrant support

References

Project: Makkah First Ring Road

	Challenge	Solution
 **Application: lighting system for Tunnel**	Highly public road serving the people visiting Holy Mosque in Makkah, its 6 km long consist of 6 bridges and 3 tunnels. The tunnel was curved structure, and they have heavy lighting system distributed on the both side of the tunnel.	Fischer proposed heavy duty grid system using FUS system with accessories to fix the lighting system alone with cable tray, to make sure the installation done on high level we agreed to have weekly pull-out test randomly for all installed anchors.   

References

Project: Riyadh Metro Project

	Challenge	Solution
	TBM Tunnel for metro project, challenge was to fix cable tray support on curved wall with limitation of drilling	Fischer proposed cantilever arm FCA with include base plat to match the inclination angle fixed by FAZ II  

Application: Cable Tray Support

References

Project: Riyadh Metro Project

	Challenge	Solution
	TBM Tunnel for metro project, challenge was to fix piping support on curved wall with limitation of drilling	Fischer proposed cantilever arm FCA with include base plat to match the inclination angle fixed by FAZ II  

Application: Piping Supports

References

Project: Riyadh Metro Project

	Challenge	Solution
  **Application: FAN Supports**	TBM Tunnel for metro project, challenge was to fix Fan on curved wall with limitation of drilling and design under dynamic effect	Fischer proposed ready made structure system using FUS accessories connected to the structure with FHB II Dynamic   

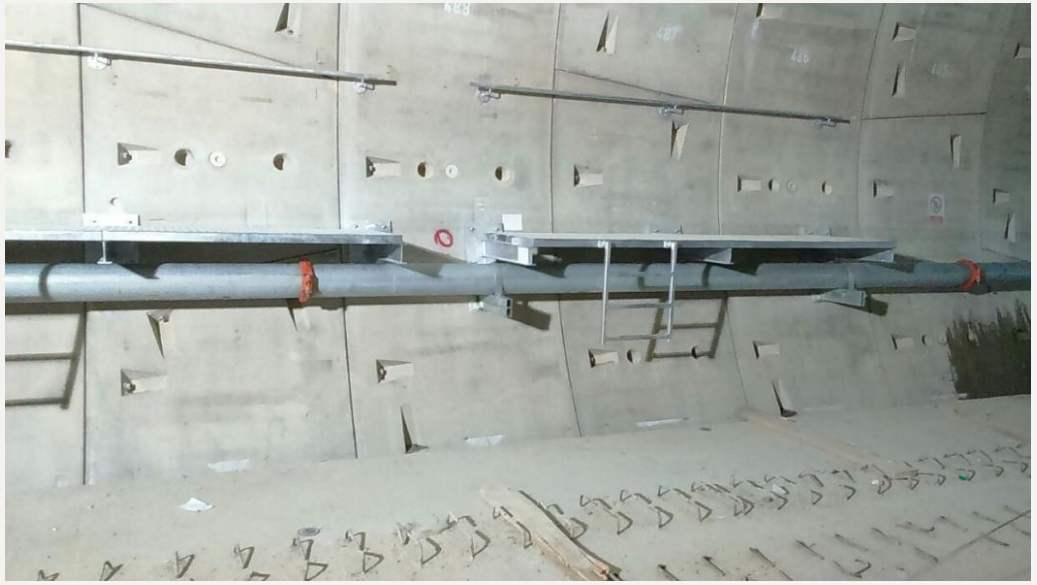
References

Project: Riyadh Metro Project

	Challenge	Solution
 **Application: Fix cladding around Viaduct**		Fischer proposed FIS EM Plus to fix all cladding around viaduct of Riyadh metro 

References

Project: Riyadh Metro Project

	Challenge	Solution
	TBM Tunnel for metro project, challenge was to fix Walkway on curved wall with limitation of drilling and design under seismic effect	Fischer proposed to use Chemical anchor system FIS EM and submit the design under the seismic conditions 

Application: Walkway Fixings

References

Project: Riyadh Metro Project		
	Challenge	Solution
 **Application: General rebar connections**		fischer proposed chemical anchor FIS EM Plus & FIS V 

References

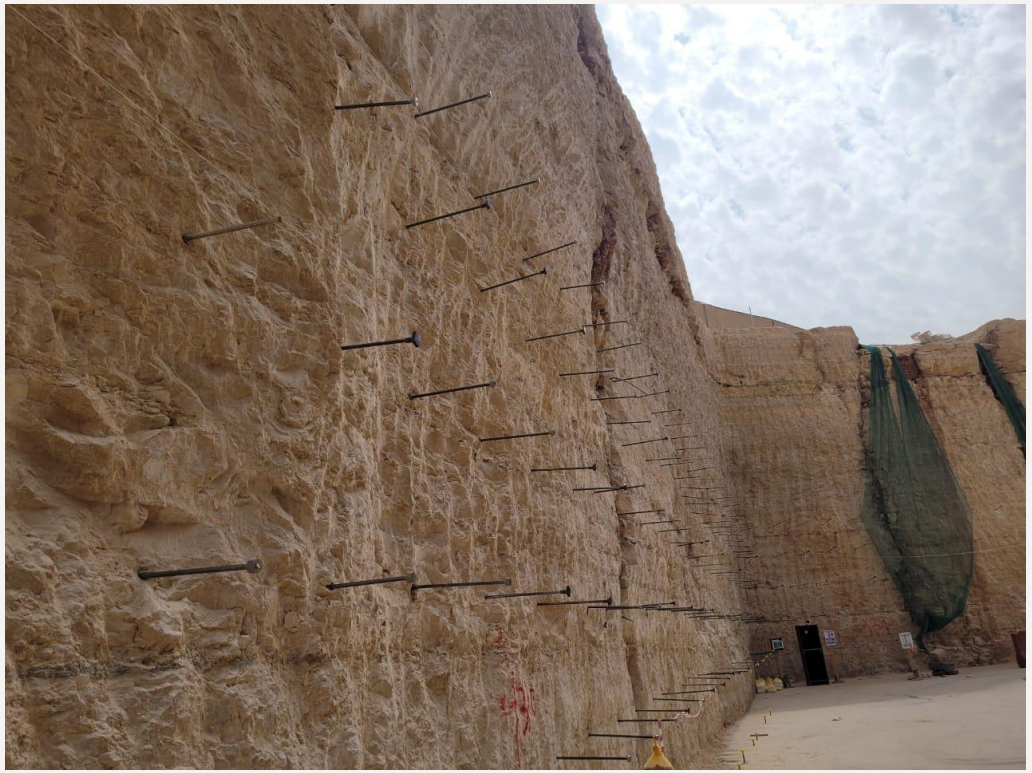
Project: Diriyah Gate Infrastructure Tunnel

	Challenge	Solution
	Tunnel of 3 km long, cut & cover in the limestone of Riyadh, challenge was to fix the anchoring system in light weight rocks to carry a high load	fischer proposed chemical anchor FIS EM Plus with high impediment length to fix the formwork structure on the rocks 

Application: Formwork Fixation

References

Project: Diriyah Gate Infrastructure Tunnel

	Challenge	Solution
	Tunnel of 3 km long, cut & cover in the limestone of Riyadh, challenge to connect the Mass wall to the rock side	fischer proposed chemical anchor FIS EM Plus with high impediment length to fix the rebars to structure the rocks 

Application: Mase wall connections

References

Project: Diriyah Gate Infrastructure Tunnel		
	Challenge	Solution
 Source: Google **Application: Fire Protection Board**		fischer proposed FNA 6 A4 

References

Project: Neom – The Line

	Challenge	Solution
	Fixing kicker formwork on a light duty concrete layer, challenge to the high load requirement with seismic effect	fischer proposed chemical anchor FIS EM Plus with high impediment length to fix the formwork to the concert to the rock under concrete layer 

Application: Kicker Concrete Formwork

References

Project: Neom – The Line		
	Challenge	Solution
 **Application: Ventilation Duct**	Fixing ventilation duct to the shotcrete layer	fischer proposed to use high depth of FAZ II M 16 to fix the duct through shotcrete through to the rock layers 

References

Project: King Salman Park – Roads & Tunnels

	Challenge	Solution
 **Application: Water Mist supports system**		Supply fischer FUS system to support Water mist pipe inside roads tunnel   

References

Project: Qiddiya Park – Roads & Tunnels

	Challenge	Solution
 **Application: GRC Cladding for Bridges**		Supply fischer FAZ II & FIS EM Plus to fix all GRC panel around to cover bridges  