

The development of the Fast Cable Anchor

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Our number 1 priority

Safety first



Emergency
exit



Assembly
point



Protective
equipment



Emergency
number



First
aid kit



In case
of emergency



Psychological
safety



Health and
well-being



Cyber
security





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R&D Engineer

11 years in manufacturing + 6 years in mining industry

With Sandvik since 2020





Cable Bolting

Mechanized cable bolting vs. Fast Cable Anchor application

SLOW AND LIMITING

- Long re-entry time – 12 to 24 hours
- Complete exclusion from the area – cable may fall
- Can only be tensioned after grout cures
- Grout damage when tensioning/plating

FAST AND RELIABLE

- Allows immediate re-entry
- Secure cable to bore hole upon insertion – capable of loading 100 kN or higher
- Tensioning/plating can be done immediately after insertion
- Tensioning of the whole cable without damaging the grout



Fast Cable Anchor design development

Customer values

WHEN THE FAST CABLE ANCHOR IS USED FOR CABLE BOLTING

- Secures the cable to the bore hole
- Cables can be tensioned/plated immediately after insertion
- Tensions whole length of cable before grout cures
- Allows immediate re-entry
- Toe anchor at the top of hole
- Hand-held cable installations could be a one-step process



Lab test results



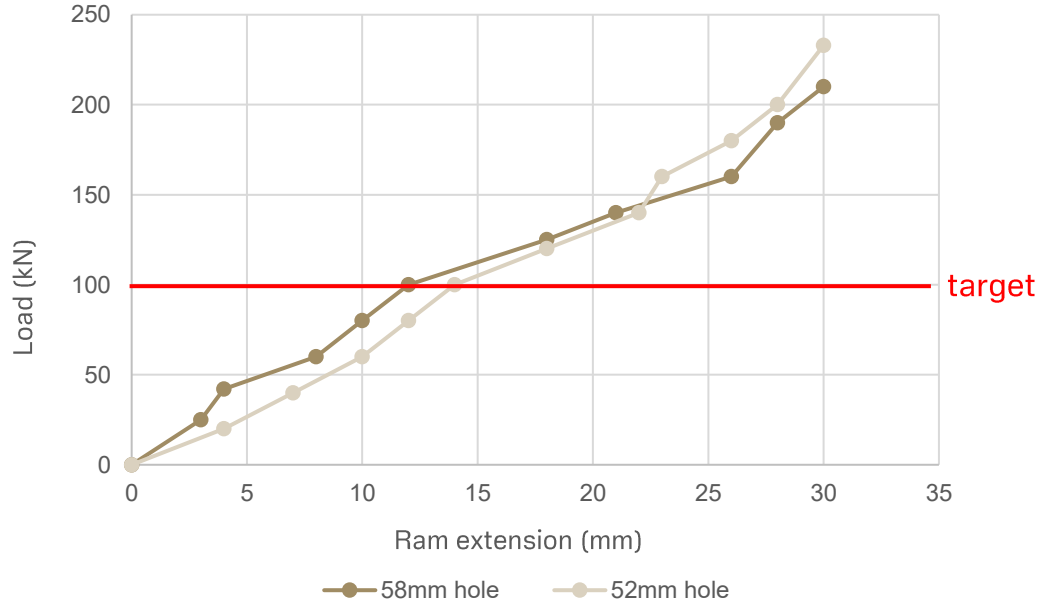
Lab testing

Confinement: MasterFlow 4600, reinforced with 4 mm basalt aggregate, cast inside of steel tube of wall thickness 12.7 mm, over 28 days curing time

Precast hole sizes: 58 mm & 52 mm

Hole length: 300 mm

Grout: general purpose cement, water / cement ratio 0.33 to 1





Underground trial results

– Sandvik Test Mine



Sandvik Test Mine in Tampere



- Hardest rock to test rigorous equipment
- Digital mining technologies are also being tested.



Sandvik Test Mine testing – Jan 2025

Testing environment

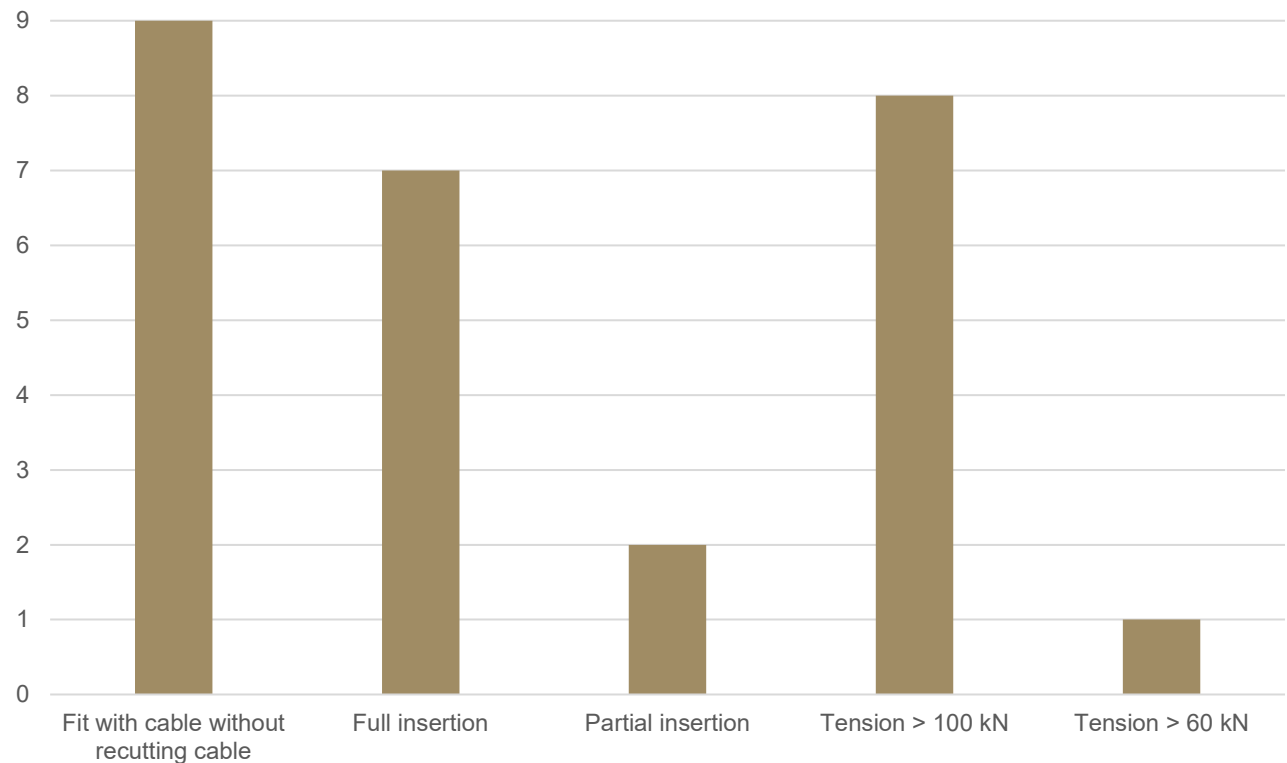
- Rock type: granite rock
- Grout: Portland cement, water / cement ratio 0.33 to 1
- Drill rig used for drilling and insertion: DS422i
- Drill bit size: multiple
- Hole length: 10 m

Evaluation

- Fast cable anchor assembly to cable
- Insertion into pre-grouted holes
- Immediately tension to 100 kN



Sandvik Test Mine testing results





Underground trial results

– Fosterville Gold Mine

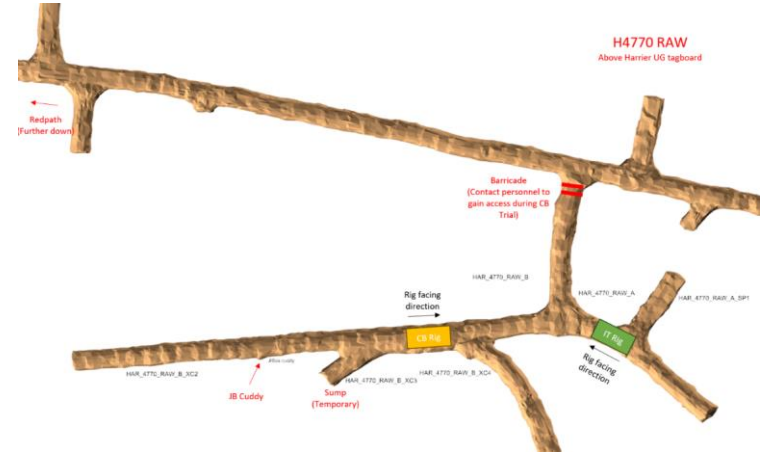
Fosterville Gold Mine trial results

Testing environment

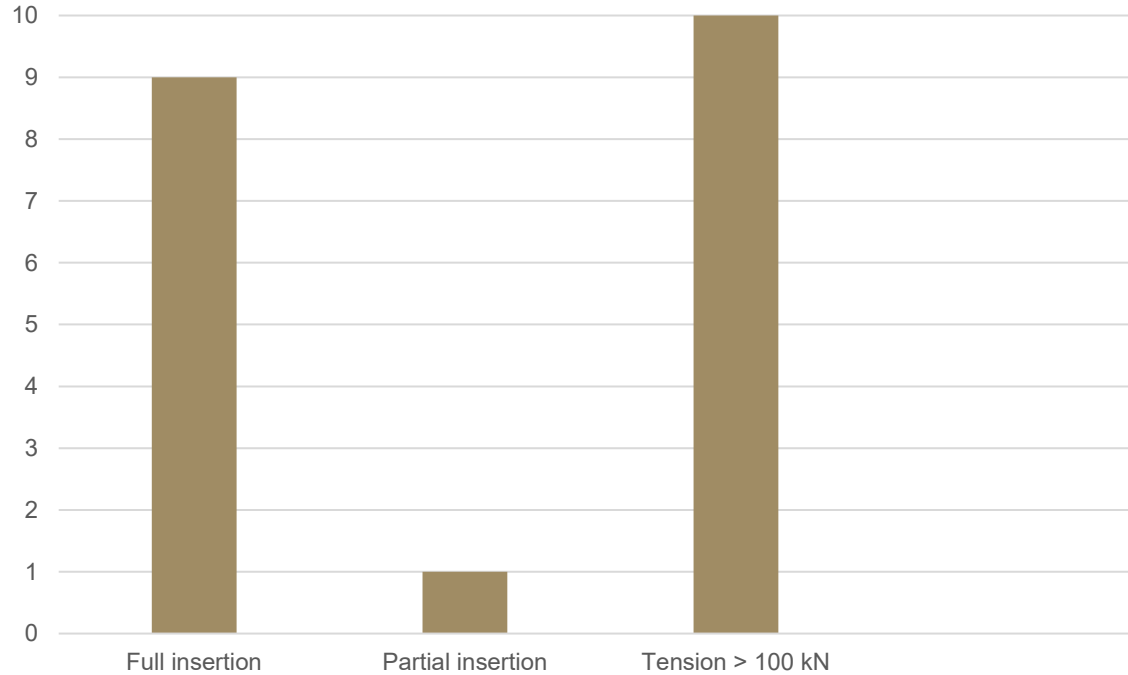
- Rock type: an interbedded sandstone and shale turbidite sequence
- Grout: Builder cement with water / cement ratio 0.3 to 1
- Drill rig used for drilling and insertion: DS421
- Drill bit size: multiple
- Hole length: 8m

Evaluation

- Insertion into pre-grouted holes
- Immediately tension to 100 kN



Fosterville Gold Mine trial results





Conclusion



Fast Cable Anchor performance

Summary

- Successfully tested in lab, Sandvik Test Mine and Fosterville Gold Mine
- Capable of securely gripping both igneous and sedimentary rock types
- Easy to insert onto cable bolter cut cable
- Immediate tension higher than 100 kN





FCA17.8 is also available



	FCA15.2	FCA17.8
Length	237 mm	237 mm
Weight	1 kg	1 kg
Min. hole size	52 mm	52 mm
Max. hole size	58 mm	58 mm
Cable diameter	15.2 mm	17.8 mm
Cable type	7 wire plain strand cable or 7 wire spirally indented cable	7 wire plain strand cable or 7 wire spirally indented cable
Spring guard color	Orange	Blue

Thank you



Questions?