

Grouting Instruction VL4 FIRST GROUT FAN

Tunnel	VL4 (W=6,9-H=6,9)
Instruction N°	General instruction 572

Instructed by:	Ricard Rúbies
Instruction date:	04-06-2016

Chainage	1+722.9
Total Inflow face (L/s)	3,5
Total Inflow Probe holes (L/s)	3
Water pressure measured	8 bar

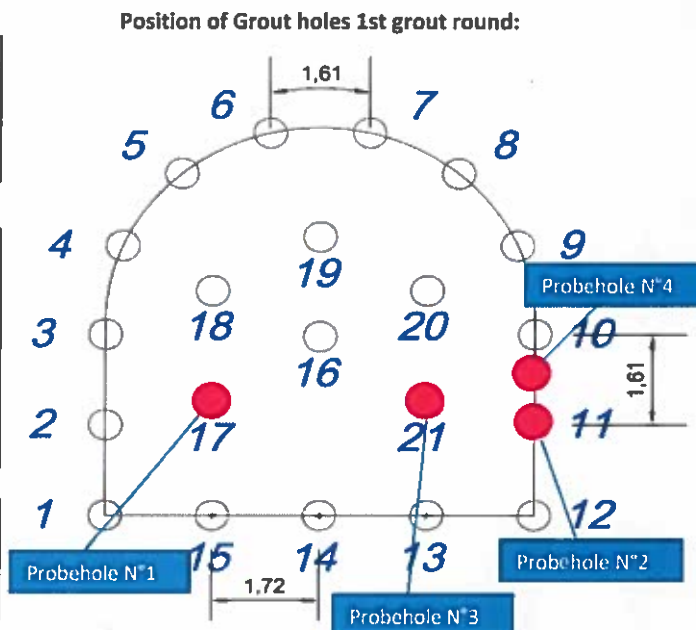
HOLES	
N° of Grout holes first curtain	21
Grout holes length (m)	27
Grout hole angle ref Tunnel axis	15°

1-DRILL 4 PROBE HOLES:

DRILL PROBE HOLES IN POSITIONS Nr 17, Nr 11, Nr 21 AND AN EXTRA PROBE HOLE GOING UP 10° IN POSITION 10A. GROUT ALL PROBE HOLES AS STANDARD GROUTING.

2- DRILL THE HOLES TO COMPLEAT THE 1st CURTAIN (21 HOLES) AND GROUT:

DRILL THE HOLES AND INSTALL THE PACKERS. DRILL TO FULL LENGTH (IF $Q_w < 10$ l/s), OTHERWISE DRILL TO END OF RESPECTIVE ROD. MEASURE WATER INFLOW AND PRESSURE.

3- GROUT ALL HOLES AS INDICATED BELOW AND IN "NOTES".**NOTES:**

1- The maximum increase of grouting pressure shall be not more than 2,5 bar per minute.

Design Mix (Type A,B,C, D or E)

A

WCR

0.45 if water inflow > 2.5 L/s
0.65 if water inflow < 2.5 L/s

Closure criteria

Pmax	25
Vmax (L/m borehole)	85
GIN	1000

CONTRACTOR COMMENTS:

SUBJECT TO FURTHER COMMENTS

GROUTING HOLE No 2 WILL BE USED
FOR GEOLOGICAL MAPPING.

A. Deñam 05/06/2016

STRABAG

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