

PRODSO6

Dimension stone block pre-splitting (delving)



Overview

Achievement of this standard demonstrates your competence in splitting dimension stone using manual equipment, commonly referred to as “plug and feather” splitting. You will be able to position the stone and secure it in such a way as to make the work area safe, direct the drill rig operator to drill in line with the specification required for the stone block, and then, split the stone using plugs and feathers with either a hand or hydraulic hammer. Following the splitting operation you will remove the block to storage or processing in a safe and controlled manner.

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Performance criteria

- You must be able to:*
- P1 Position the dimension stone to be split, observing and noting natural faults and planes which will assist the splitting operation
 - P2 ensure that the area selected to be split has sufficient room for displacement
 - P3 determine and mark out the applicable drilling pattern for the area selected, considering the need for open or “stitch” drilling
 - P4 direct the drill operator to drill the required pattern
 - P5 ensure the work area is safe for access and egress after the drilling operation
 - P6 select and check the condition of the applicable hand tools for the splitting operation
 - P7 check the depth of the drill holes to ensure sufficient clearance for the plugs and feathers to operate correctly
 - P8 ensure that the plugs and feathers are inserted in the drill holes in the correct manner, checking the direction of the “ears” on the feathers face along the line of the proposed split
 - P9 strike the wedges in sequence, monitoring the tone of the plug and maintaining the consistency of the tension across the line of the split
 - P10 monitor the progression of the split in the stone and increase the tension accordingly
 - P11 stop the tensioning of the split once the stone has separated
 - P12 safely remove the split block(s) for storage and/or further processing
 - P13 remove the plugs, feathers and other equipment from the work area
 - P14 inspect and make safe the area for subsequent operations

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Knowledge and understanding

- You need to know and understand:*
- K1 approved procedures and practices in the context of the operations, the work activity and the workplace environment
 - K2 responsibilities under the health and safety statutory requirements.
 - K3 methods of defining, demarcating and clearing the work area
 - K4 types of tools and equipment used with the operation and work activity.
 - K5 procedures for reporting of problems.
 - K6 methods of communication with and direction of drill rig operators
 - K7 procedures for the safe positioning of the rock to be split
 - K8 how the geology of the rock effect the selection of stone for splitting
 - K9 what factors of the geology of the dimension stone impact on the placement of the drill holes
 - K10 checks carried out on equipment and tools before use
 - K11 organisational and local procedures for use of hand tools in the splitting operation
 - K12 defect recording/reporting methods and procedures
 - K13 methods of communication within the work activity
 - K14 methods to remove dimension stone from work area for storage and/or further processing
 - K15 methods of safe storage of tools and equipment
 - K16 procedures for making the area safe for ongoing operations

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Additional Information

Scope/range related to knowledge and understanding

- S1 Procedures and practices: organisational; environmental; regulatory; emergency; operational.

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Developed by	Proskills
Version number	1
Date approved	January 2013
Indicative review date	January 2018
Validity	Current
Status	Original
Originating organisation	Proskills
Original URN	PRODSO6
Relevant occupations	Coal Mining Operatives; Quarry workers and related operatives; Manager in Mining
Suite	Dimension Stone
Key words	Extraction; extractives ;dimension stone; hydraulics; splitting; mineral; sawing; lathe; turning; drilling