



Stone cutter

Who is a stone cutter?

Stone cutters process crude stone into masses and blocks (by cutting, shaping, breaking, processing, polishing, removal of sections, etc.) into desirable sizes, patterns and degrees of finishing; this is done by using manual and mechanical work tools, for the purpose of building, decorating, creation of statues and similar goals.

What is dangerous about this job?

- Falling, either from heights or due to collapse of scaffolding
- Eye injury resulting from penetration of ricochets and stone splinters into the eyes
- Hearing loss due to the excessive noise created throughout cutting and processing of the stones
- Dermatitis and allergic reactions stemming from direct contact with dust, glues, cement, plaster, polishing materials, solvents, etc.
- Exposure to mineral dust can cause pneumoconiosis
- Hazard of contracting silicosis as a result of prolonged exposure to dust containing free silica
- Back pains and other musculoskeletal problems caused by overexertion and incorrect posture while lifting and moving heavy objects.

Hazards related to this job

Specific preventive measures can be seen by clicking on the respective in the third column of the table.

	<ul style="list-style-type: none"> • Falling, either from heights or due to collapse of scaffolding 	1
	<ul style="list-style-type: none"> • Slips, trips and falls on the level at the work site 	2
	<ul style="list-style-type: none"> • Injury caused by falling objects, work tools, blocks of stone, etc. 	1 3
	<ul style="list-style-type: none"> • Overexertion or strained movements throughout the lifting of heavy loads 	4
	<ul style="list-style-type: none"> • Injury resulting from work with mechanical and pneumatic equipment, or from being hit by a manual work tool 	3
	<ul style="list-style-type: none"> • Eye injury resulting from penetration of ricochets and stone splinters into the eyes 	3
	<ul style="list-style-type: none"> • Severe hearing loss as a result from the excessive noise produced while breaking and processing stones 	5
Physical hazards	<ul style="list-style-type: none"> • Exposure to environmental factors, including extreme heat or cold, that can 	6



cause dermatitis

- Potential exposure to laser radiation while using a laser machine for engraving inscriptions on gravestones or statues.

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Chemical hazards



- Skin inflammations (dermatitis and eczema) and allergic reactions as a result of direct contact with dust, glues, polishing materials, plaster, solvents, whitewash, cement, oils, etc.

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- Pigmentation and skin inflammation as a result of exposure to ricocheting particles

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- Advanced systemic sclerosis as a result of exposure to quartz dust containing free silica

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- Hazard of developing silicosis as a result of prolonged exposure to free-silica-containing dust

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- Exposure to noxious dusts, esp. to suspended particles [see Note]

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- Exposure to mineral dust may cause pneumoconiosis

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- Exposure to glues containing organic solvents; and/or to lead (this is relevant to a stoneworker who installs statues and engravings inscriptions, into which sometimes molten lead is cast).

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Biological hazards



- There are no specific hazards, except for the possibility of contracting a parasitic disease, and/or allergic reaction caused by the bite of ticks and/or other insects thriving at the site of the stone works (depending on the geography and topography of the region).

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Ergonomic, psychosocial and organizational factors



- Back pains and other musculoskeletal problems caused by over-exertion and incorrect posture while lifting and moving heavy objects

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- Carrying heavy loads may cause back pain and injury of the discs between the vertebrae of the spinal column

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- A feeling of total fatigue, as a result of performing physical work in a noisy environment

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- Musculoskeletal system interference and low back pain, caused by working in a squatting position and/or other inconvenient postures while working the stones

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- Development of hand-arm-vibration-syndrome [HAVS].

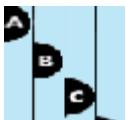
Preventive measures

- 1** All work surfaces must be properly installed in order to prevent their collapse and/or falls of workers or object from them; they must be safely fenced and it should be verified that they are stable and in good physical condition; when working on a ladder, it must be verified that the ladder is safely positioned
- 2** Safety shoes with non-skid soles should be worn
- 3** Personal protection equipment should be used, including clothing (long slacks and long-sleeved shirt), gloves, respirator or mask, crash-helmet and safety goggles
- 4** As far as possible, avoid manual lifting of heavy loads; lifting-aids or equipment should be used
- 5** Appropriate ear-protection equipment (ear plugs/head phones) should be used
- 6** Work clothes should conform to the environmental climatic conditions at the work site (excessive heat or cold); it is essential to drink sufficient amounts of water and to use appropriate head cover
- 7** Working with this instrument must be according to the manufacturer's instructions, in conformity with the IAEA guidelines
- 8** Direct contact with irritating and/or allergenic substances should be reduced to a minimum; use products that protect the skin; hands should be washed thoroughly at the end of the work shift; use gloves when necessary
- 9** When working with noxious dusts, use personal protection equipment for the respiratory system and the eyes; all workers must be using them
- 10** Ask for medical assistance if the worker develops skin rash; an allergy expert could advise how to deal with sensitivity to dust, insect bites, etc.
- 11** The worker must be instructed in the use of correct techniques for moving and lifting heavy loads and in the use of mechanical lifting aids; it is advisable to consult an occupational ergonomist/psychologist.

Specialized information

Synonyms Chisel worker; stone dresser; stone worker.

Definitions and/or description Stonecutter cuts, shapes, and finishes rough blocks of building or monumental according to diagrams or patterns: Traces around pattern or transfers dimensions from diagrams to stone, using rule, straightedge, compass, square, and chalk or scribe. Selects surfacing tools according to finish specified or step in finishing process. Chips fragments of stone away from marks on stone, working surface of stone down to specified finish. Verifies progress of finishing ensuring adherence to specifications, using straightedge, level, plumb, and square. May dress surface of stone with bush-hammer. May cut decorative designs in stone surface. May cut moldings or grooves in stone that cannot be reached by machine. May drill holes in stone. May be designated stone according to product as Building Stonecutter (stonework); Curbing Stonecutter (stonework); Monument Stonecutter (stonework) [DOT].



Related and specific occupations Mason; quarry worker; sculpture (stone); statue installer; stone carver/engraver/etcher/polisher/processor; stonecutting worker.

Tasks Adjusting; carving; cleaning; complying; controlling; crushing; cutting; drawing; drilling; driving; engraving & etching (grooves & inscriptions in the stone); examining; filling; finishing; fixing (the finished stone within the statue); handling; installing; lifting & lowering; loading; maintaining; mobilizing; moving; operating; polishing; preparing (stone surfaces); processing; quarrying;

receiving; removing; sawing; selecting (type/mass of stone); separating; shaping; sketching; splitting (stones); stone-working; straightening; supplying; transferring; transporting; unloading; writing (inscriptions).

Primary equipment used

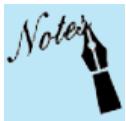
Compressor; drills; grinding machines; hoists & levers; manual working tools (chisel, hammer, mallet, wedge...); personal-protection equipment (ear plugs, safety shoes and boots, crash helmets...); pickup truck; pneumatic-hammer; polishing machine; stone-saw.

Workplaces where the occupation is common

Building contractors; building-stone suppliers; columns, pillars, statues and gravestones builders/manufacturers; construction companies; marble-processing plants.

Notes

Suspended particles of a diameter less than 10 microns ($PM < 10$ micron) and all particles with a diameter less than 2.5 micron constitute a potential health hazard. These particles can accumulate inside the human respiratory system and cause serious health problems: esp. respiratory irritation, allergic reactions, coughing and shortness of breath, decreased lung function, asthma and pneumonia.



References

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