

Model Curriculum

Drill Machine Operator - Stonecraft

SECTOR: HANDICRAFTS AND CARPET
SUB-SECTOR: HANDICRAFTS (STONECRAFT)
OCCUPATION: STONE CRAFTING
REF ID: HCS/Q1503, V1.0
NSQF LEVEL: 4



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

HANDICRAFTS AND CARPET SECTOR SKILL COUNCIL

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: 'Drill Machine Operator - Stonecraft' No. 'HCS/Q1503 NSQF Level 4'

Date of Issuance: July 9th, 2015

Valid up to: July 9th, 2019

* Valid up to the next review date of the Qualification Pack



Authorised Signatory
(Handicrafts and Carpet Sector Skill Council)

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Drill Machine Operator - Stonecraft

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Drill Machine Operator - Stonecraft”, in the “Handicrafts and Carpet” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Drill Machine Operator - Stonecraft		
Qualification Pack Name & Reference ID.	HCS/Q1503, v1.0		
Version No.	1.0	Version Update Date	09/11/2018
Pre-requisites to Training	Preferably 5 th pass		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Identify raw materials and tools required for performing drilling operation on stone. • Interpret work instructions. • Operate drill machine to shape the flat stone. • Maintain productivity and quality standards. • Demonstrate teamwork during inter/intra departmental work or engagement. • Maintain Safe work environment. • Maintain personal health. 		

This course encompasses 4 out of 4 NOS (National Occupational Standards) of “Drill Machine Operator - Stonecraft” Qualification Pack issued by “Handicrafts and Carpet Sector Skill Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 00:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> Identify different stone craft products. Classify the stone craft industry in India. Summarise the use of various tools and equipment used by a Drill Machine Operator – Stonecraft. 	Drilling machine, chisel, hammer, different drills, micrometer, rammers, wax
2	<p>Identify the requisites for drilling operation on stone</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 25:00</p> <p>Corresponding NOS Code HCS/N1504</p>	<ul style="list-style-type: none"> Identify the raw materials for performing drilling operation. Identify the tools and equipments to be used for performing drilling operation on stone. Interpret design requirements received from supervisor. Interpret product template and work instructions received from supervisor. Identify standard operating procedures for handling slabs. Maintain quantitative records of stone slabs received for drilling. 	Drilling machine, chisel, hammer, different drills, micrometer, rammers, wax
3	<p>Perform drilling operation on stone</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 30:00</p> <p>Corresponding NOS Code HCS/N1504</p>	<ul style="list-style-type: none"> Identify comfortable and stable position to place the stone for drilling. Identify the use of handheld drill machine. Identify the functions of a handheld drill machine. Identify the use of hammer and chisel in performing drilling operation on stone. Identify the use of various tools and equipments for smoothening drilled cavities. Perform drilling of the stone as per product specifications. Apply standard operating procedure while performing drilling operations. Maintain quality requirements while performing drilling operations. Maintain production requirements (quantity) while performing drilling operations. Maintain minimum wastage of materials while performing drilling operations. 	Drilling machine, chisel, hammer, different drills, micrometer, rammers, wax
4	<p>Coordinate with colleagues and work as a team</p>	<ul style="list-style-type: none"> Summarise job order and instructions from reporting supervisor. Classify the work output requirements, 	Drilling machine, chisel, hammer, different drills,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 15:00</p> <p>Corresponding NOS Code HCS/N9901</p>	<p>targets, performance indicators and incentives.</p> <ul style="list-style-type: none"> • Formulate plans to deliver quality work on time and report any anticipated reasons for delays. • Create reports on any grievance, production defect and potential hazard. • Communicate on possible process flow improvements. • Communicate maintenance and repair schedules proactively to the supervisor. • Examine feedback on work standards. • Develop proper interaction with respective person to clarify any kind of doubt. • Create reports on shortage or need of raw materials in time. • Elaborate completed work to supervisor. • Communicate with colleagues from within and other departments, clearly and effectively on all aspects, to carry out work efficiently in a team. • Maintain personal etiquettes – polite language, taking up responsibility, disciplined behaviours towards colleagues, etc. • Develop a healthy relationship with colleagues from different functions and understand the nature of their work. • Organise goals and multi-task when required. • Resolve conflicts and ensure smooth workflow. • Identify production requirements. • Communicate and discuss work flow related difficulties in order to find solutions with mutual agreement. • Distinguish feedback from Quality Control and rework in order to complete work on time. • Explain information to colleagues to enable efficient delivery of work. • Identify any error of colleagues, help them to rectify and ensure quality output. • Develop cooperation, coordination, communication and collaboration towards the shared goals, supporting each other's performance while carrying out designated work. • Summarise all the details relating to one's role accurately and as required. • Create report on the completed work and maintain records for the same. 	<p>micrometer, rammers, wax</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
5	<p>Maintain safe work environment</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 25:00</p> <p>Corresponding NOS Code HCS/N9902</p>	<ul style="list-style-type: none"> Comply with safety procedures while on work to prevent accidents. Identify adequate safety measures while handling materials, chemicals and tools. Choose appropriate personal protective gears while working. Perform basic safety checks before operating any tool or electrical equipment. Select appropriate and recommended clothing with respect to work environment. Demonstrate recommended material handling procedures to control material and personal damage. Perform all procedures as per company's work instructions in order to control operational risks. Perform duties in a manner which minimizes environmental damage. Organise wastes safely and correctly in designated areas as per company's SOP. Create reports on accidents, incidents or problems and submit it to the supervisor without delay. Maintain zero accident at workplace. Maintain safety standards and ascertain no material damage. 	Drilling machine, chisel, hammer, different drills, micrometer, rammers, wax
6	<p>Maintain personal health</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 25:00</p> <p>Corresponding NOS Code HCS/N9903</p>	<ul style="list-style-type: none"> Change protective equipments when required. Comply to work instructions strictly in order to reduce the amount of pollution at work place. Maintain eye protection using proper personal protective equipment. Plan to protect oneself from blisters, scratches and cuts. Formulate preventive health checkups at regular intervals. Plan prompt treatment from doctors in case of illness. Adapt to SOPs for dealing with blisters, scratches, accidental fires or any other type of emergencies at work. Maintain absence of productivity loss or absenteeism from work due to illness. Identify ways to ensure no long term ill effect on personal health. 	Drilling machine, chisel, hammer, different drills, micrometer, rammers, wax
	<p>Total Duration</p> <p>Theory Duration 70:00</p>	<p>Unique Equipment Required: Computer, Projector, white board, maker, personal protective equipments, drilling machine, chisel, hammer, different drills, micrometer, rammers, wax</p>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Practical Duration 120:00		

Grand Total Course Duration: **190 Hours, 0 MinuteS**

(This syllabus/ curriculum has been approved by Handicrafts and Carpet Sector Skill Council)

Trainer Prerequisites for Job role: “Drill Machine Operator - Stonecraft” mapped to Qualification Pack: “HCS/Q1503, v1.0”

Sr. No.	Area	Details
1	Description	The individual at work is responsible for using a stone drill machine with variety of rammers to hollow out the flat stone as per the product template.
2	Personal Attributes	The job requires the individual to have eye-hand coordination, manual dexterity, finger dexterity, good near vision, repetitive squatting, bending, lifting heavy weight, moving and ability to work for long hours in sitting position. The individual must be able to work under different environmental conditions in the open area.
3	Minimum Educational Qualifications	10 th pass
4a	Domain Certification	Certified for Job Role: “ <u>Drill Machine Operator - Stonecraft</u> ” mapped to QP: “HCS/Q1503, v1.0”. Minimum accepted score is 80%
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “ <u>Trainer</u> ”, mapped to the Qualification Pack: “ <u>MEP/Q0102</u> ”. Minimum accepted % as per respective SSC guidelines is 80%.
5	Experience	<ul style="list-style-type: none"> • Total 3 Years experience, • 2 Years of sector-specific experience, • Min. 1 year of teaching experience

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Drill Machine Operator – Stonecraft

Qualification Pack: HCS/Q1503

Sector Skill Council: Handicrafts and Carpet

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for each PC.
2. Each NOS will be assessed both for theoretical knowledge and practical.
3. The assessment will be based on knowledge bank of questions created by the SSC.
4. Individual assessment agencies will create unique question papers for theory and skill practical part for each candidate at each examination/training center.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

		Total Marks (400)			
HCS/N1504	Create cavity inside the flat stone				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Receiving flat slabs and work instructions	PC1. receive flat slabs with product design marking from the supervisor	100	2	1	1
	PC2. receive product template and work instructions from the supervisor for day's work		2	1	1
	PC3. follow standard operating procedure while handling slabs		4	1	3
	PC4. place slabs in a way so that work flow is smooth and there is no damage to other slabs		4	1	3
	PC5. document the quantity of flat slabs of stones received		3	1	2
Operating drill machine to shape the flat stone	PC6. take one flat slab and place it on ground		4	1	3
	PC7. rest it in comfortable and stable position		4	1	3
	PC8. plug in the handheld drill machine to connect it with electricity		4	1	3
	PC9. switch on the machine and start making a hole inside the flat stone as per the product design		6	1	5
	PC10. change rammer of the drill machine as per the shaping requirements of the product		7	2	5

	PC11. create hole with the help of rammer / repeatedly creating multiple holes in nearby areas to create a cavity inside the flat slab as per the product template	9	2	7
	PC12. remove the remaining stone with the help of chisel and hammer	6	1	5
	PC13. smooth the cavity surface using different sizes of rammers on the drill machine	6	1	5
	PC14. fill cracks or imperfections in marble with wax that matches the stone color	6	1	5
	PC15. handover the product to supervisor for further processing	3	1	2
Achieving productivity and quality standards	PC16. understand the product template and work instructions to create the cavity inside the flat stone slab	4	1	3
	PC17. drill the flat slab cleanly without breaking / damaging it	10	3	7
	PC18. achieve daily targets with no wastage of flat stone slabs	10	3	7
	PC19. segregate and dispose of scrape as per the company's SOP	6	1	5
	TOTAL POINTS	100	25	75

HCS/N9901	Coordinate with colleagues and work as a team				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Interact with supervisor	PC1. receive job order and instructions from reporting supervisor	100	4	3	1
	PC2. understand the work output requirements, targets, performance indicators and incentives		5	4	1
	PC3. deliver quality work on time and report any anticipated reasons for delays		5	1	4
	PC4. report on any grievances, production defects and any potential hazards		4	2	2
	PC5. communicate on process flow improvements		4	2	2
	PC6. communicate maintenance and repair schedule proactively to the supervisor		4	1	3
	PC7. receive feedback on work standards		4	2	2
	PC8. interact and clarify doubts on design, usage of materials & tools, quality & standards compliance, etc		5	2	3
	PC9. report in time for shortage or need of raw materials		4	1	3
	PC10. handover completed work to supervisor		4	2	2
Work as a team by coordinating	PC11. communicate to the colleagues from within and other departments, clearly and effectively on all aspects to carry		5	2	3

with colleagues within and outside the department	out the work among the team			
	PC12. maintain the etiquettes, use polite language, demonstrate responsible and disciplined behaviours to the colleagues	5	2	3
	PC13. interact with colleagues from different functions and understand the nature of their work	4	2	2
	PC14. put team over individual goals and multi task or share work where necessary supporting the colleagues	4	2	2
	PC15. resolve conflicts and ensure smooth workflow	4	1	3
	PC16. interact and understand the production requirement for the day from the previous and successive processing department and work accordingly	4	1	3
	PC17. communicate and discuss work flow related difficulties in order to find solutions with mutual agreement	4	1	3
	PC18. receive feedback from Quality Control and rework in order to complete work on time	5	1	4
	PC19. share information with colleagues to enable efficient delivery of work	6	3	3
	PC20. highlight any errors of colleagues, help to rectify and ensure quality output	4	2	2
	PC21. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each others performance	4	1	3
Report and Document	PC22. document all the details accurately relating to one's role as required	4	1	3
	PC23. report on the work completed and keep it in records	4	1	3
	TOTAL POINTS	100	40	60

HCS/N9902	Maintain safe work environment				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Follow safety procedure and practices	PC1. comply with safety procedures while on work to prevent accidents	100	8	2	6
	PC2. take adequate safety measures while handling materials, chemicals and tools		8	2	6
	PC3. wear appropriate personal protective gears such as gloves, protective goggles, masks etc. while working		8	2	6
	PC4. undertake basic safety checks before operation of all tools and electrical equipments		9	2	7

	PC5. wear appropriate and recommended clothing as per the work environment (eg: working in a furnace area)		9	2	7
	PC6. follow recommended material handling procedure to control material and personal damage		8	2	6
	PC7. perform all procedures as per company's work instructions for controlling operational risk		8	4	4
	PC8. perform the duties in a manner which minimizes environmental damage		6	2	4
	PC9. dispose of waste safely and correctly in a designated area as per company's SOP		8	2	6
	PC10. report any accidents, incidents or problems without delay to the supervisor and take necessary immediate action to reduce further danger		8	4	4
Achieve safety standards	PC11. ensure zero accident at workplace		10	2	8
	PC12. adhere to safety standards and ensure no material damage		10	2	8
	TOTAL POINTS		100	28	72

HCS/N9903	Maintain personal health				
NOS Element	Performance Criteria		Out of	Theory	Skills Practical
Adopt healthy work practices	PC1. always cover the mouth and nose with a dust mask while working and keep on changing when it gets blocked with dust	100	12	4	8
	PC2. follow work instructions strictly to reduce the amount of pollution at the work place e.g. wet the rock / craft material before working on it		10	2	8
	PC3. wear protective goggles over eyes and replace them when scratches on it obscure the vision		10	2	8
	PC4. wear gloves as per the materials used for making handicraft to avoid blisters; scratches and cuts		10	2	8
	PC5. undergo preventive health checkups at regular intervals		10	2	8
	PC6. take prompt treatment from the doctor in case of illness		11	3	8
	PC7. follow SOPs for dealing with blisters; scratches; accidental fires or any other type of emergencies at work		11	4	7
Achieve work productivity while	PC8. ensure no productivity loss or absenteeism from work due to illness		13	3	10

maintaining health	PC9. ensure no long term ill effect on the personal health		13	3	10
	TOTAL POINTS		100	25	75