



LESSON NOTES

School: Ba Sangam College

Year/Level: 12

Name:

Subject: Applied technology

Worksheet 22

Year:

Strand	Applied engineering
Sub Strand	Refrigeration and Air Con
Content Learning Outcome	Define and give the application of refrigeration tools

REFRIGERATION TOOLS

**Slip Joint Plier** – is a mechanical plier with a slip joint in order to adjust the size. Either for fastening a 1/2" pipe to loosening a 1" water pipe, it is a very handy tool to have. I have with me a 10" slip joint plier all the time.



**Electrical Plier** – Insulated plier use by electrician. An 8 inch electrical plier is a must have in your tool box. There are time when it is necessary to remove a live fuse from a fuse box. Or arranging the stranded wires.



**Pipe Wrench** – is a wrench for fastening tubes and pipes. A 12 in pipe wrench must be in your tool box as well. Sometimes we have to remove a rounded hex nut.



**Socket Wrench set** – wrench with driving socket. We have the 1/2" drive and the 3/8" drive and the 1/4" drive. I carry all of them when I am on the field. You will need a socket wrench to remove a remote hex nut or bolt where you have to add extension just to remove it. The set come with a ratchet which is also a very handy tool.



**Nut Drivers** – Hand held driver to drive or remove hex nuts or bolts. Mostly applicable to deep down places where our hand is not able to reach. Straight hand grip type and the T-type drivers are available for you to choose.



**Box Wrench** – Hand held box type wrenches. They come in from 1/4 of an inch to 1-1/4 inch size. Usually they are in combination as far as the size is concern. A practical tool for assembling and disassembling home air conditioner and automotive air conditioner compressors.



**Open Wrench** – Open end hand held wrench. Their sizes are from 1/8 of an inch to 1-1/4 of an inch. It is most useful when you are removing a machine bolt where access is only 50 to 75 percent, or the area is restricted that the wrench can make only one half turn.



**Flat File** – flat hardened steel with cutting ridges. Used for filing a newly cut copper tube ends to square it. Or to remove burrs from steel brackets. File surface joints so that they can fit squarely.



**Round File** – round long hardened steel with cutting ridges. Round file is very useful in enlarging a hole by filing. Cleaning a rusty steel tube, removing a clogged from a drain hole. Enlarging a flat washer hole to fit the larger bolt. Or to shape a certain parts through filing. Making prototype spare parts for hard-to-find spare.



**Half Round Files** – Half round shaped long hardened steel with cutting ridges. When it is necessary to make a hole larger where the application of a round file is not practical. The half round side can finish a curve surface, and the flat side for the flat surface.



### Review question (5 marks)

1. Give the use of a Pipe Wrench?

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(3 marks)

2. Give the use of a Flat file?

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(2 marks)