

FACULTY OF ENGINEERING

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(Iba	Name - Noush Agraved Faculty No. 19123623 Class & Ist year Batch E2.
	Greneral Instructions:
	Introductions:
	medium envincering industries with heavy use of
1	medium, engineering industries with heavy use of automatic machines, bench werek I fitting have
	impositant side of polary to complete & finish
	a job to the desired accoracy. Much of the
	scare mederial goes into the machine shops &
	suppease as finished component body jost assembly
	work is exercised out on beach work.
	The team bench woodk generally denotes the
-	oscoduction of an aseticle by hand on the bonch
,	work. the team "fitting" means assembling to
	gather of parts & nemoving metals to get
	the necessary fit.
	However, these two types of work suguine the use
	of large no. of tools & equipment & involve a no.
	a conditions at alliest the work to delice
	Shape & Size. O Fitting @clupping @ mocking Punching & Sawing & Decietting & Tapping Dieing @ measuring @ cheeking.
4	Punching (1) carriers (1) Cheeping
8	dieing measuring



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Lodha	Name MARESIA Abikasak Faculty No. 13/09/22 G
	Name MARESIA Abukhus Att. Faculty No. 13/12/9622 Class Batch 6-2
	SAFETY PRECAUTIONS:-
1·	Keep your mind fuesh & aleset in the lab. Wear peropeer unipoum, do not useas loose duss.
5. 6.	Do not use file weithout handle.  Never attempt to make supprise of electric or mechanic equipment weithout the premiseine
7. 8.	Lororange all the tools on bench peropeally.
10.	Work should be origined sound on tool grinder
12.	USE SUPPLE STOOLS & 1001 Had 100 1
	work should be properly clamped before.
14.	keep your hourds away from all the revolving -



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Lodha	Name MARESH AbaRhard Faculty No. 13.12.162.3 Class Batch
	CRUSE OF Accident:-
7.	Constant
3	waggies and times
4	Loose clatione
5.	Over Confidence.  Loose clothing  Less time and Space.
-)	



Lodha	Date	Experiment No	P. No. 04
E. rolling	Specifications	Some Common	Hand Tools: -
S-No.	Types of Tools	Specified undosc	Examples
<b>2</b> )	BENCH VICE	plates & width of the	width of jour plate-some
	PIN VICE	Min. & max. opening as collet chuck.	Small work piece
3.	PIPE VICE	min. I max. diameteer of work webich can be led	diameter of pipe Can be held.
4.	Hand VicE	Width of jaw plate & total length of vice.	Length 125 mm.
5.	FILE	length shape-cut-	300 mm fleet double Bas tased, 200 mm tecrangular double file.
6.	chizel	Slape of Cutting edge of John Lought of Chisel.	



-	Lodha	Name. MARES	Experiment No	P. No9.3
	7.	HACKSAW	min./max. distance blue the centeres of the holes at	300 mm odjustable Hacksaus feance.
	<del>-</del>		Saw frame.	
	8.	HAMMERS	shape of pane 2 total weight of hammer.	Ball pane hammer 600 gm.
	3	By SQUARE	Total length of measuring blade.	150 mm Louy Squaroce.
-	10.	BEVEL SQUARE	Total length of measuring blade	protector.
		CALIPERS	Shap of legs, greatest distance blu measuring edges & type of joints	150 mm Calipeer.
	I₿.	Dirills	Types of Shank > Size materials, type of flute	pasiallel shank, 9mm Size, high Caubon steel on tugh speed steel twist daill.
-				





Sundo Rip Bull SSI

blink helt beeg well to

- 2 10 : Stationary Support Discas water
  - Turning Lever
  - Suivel Plate
    - 4) Base Plate.
  - tot handle . squit 22341494
- - 7.) Jaw Plates
  - entruender 8.) fixed, jourse market per to
    - 1) Fixed Nut

Emerge of the sounder



well . Aught bellevelt . Agis . Mendie is Dog!

water of the of finite of a life contain their

- 12 · 10) Clamping Screw
- ]. (1) Cradan Slot 1900 (2
  - 12) Prismatic Shorts.
    - 13.) Base
- tastered the Combine broke admin

(b) Plain bround vice

Page geogra-Parallel Vice.

Lite

ell lr(1



FACULTY OF ENGINEERING

Lodha	Date Experiment No. P. No. 06.  Name MARESH ALARAMA Faculty No. 10.128630. Class Batch.
1.	BENCH VICE:-
	The most Commonly used is the
	engineer's parallel jave bench, vice, Sometimes
	Called fitteer's reice. It must be framly
	fixed to the beach with Coach Scoreus, on
	with nuts and botts. The wice excentially
3	Consists of Cost ison body, a fixed jano,
	movable your - both made of cost iscon
	Steel, handle, a Square-thoreded Scorew, and a
	steel alates brown as in a dela seperate cost
	Steel plates known as jour plates acro gired to
	the james by means of Set Sevens & they can be replaced when woorn.
	The Movement of vice is caused by the move-
	ment of the Scerew thorough the next direct under
	the movable juil & the secret is is personal
	with collar inside to prevent it ream
- 1	out of the good areas serviced. The size of
	vice is known by the weidth of its jaws.
	vice is known by the weidth of its jaws. The with Suitable for Common work versies
	feom 80 to 140 mm.

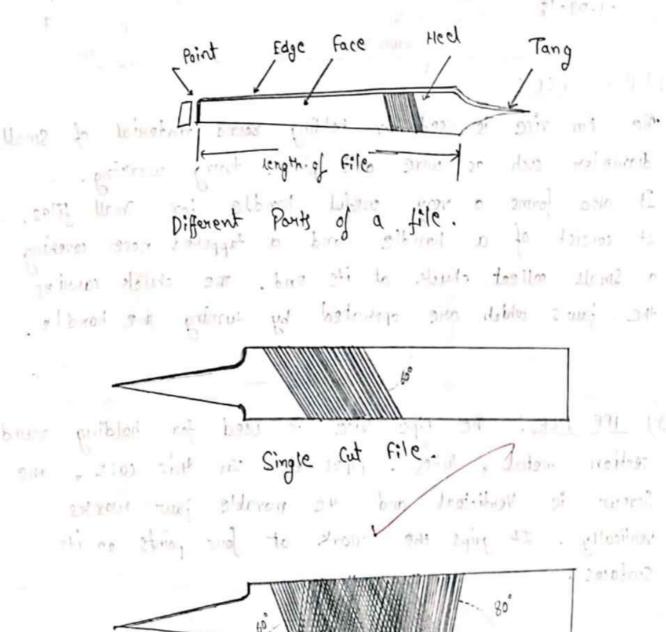
#### Pin vice. 1 Town you had the latter-1 = 120 higher of to all beau plantary trains of and the state to the same than the state of while darks and at easily placed I has you don't touch from the 1 mari 2200 12 8-4 Mx Houses to dron - tam of . Ocurse bakens - arough object . lette blim of ner fates one form Muser 22 tolli et yell bon sures to surger HJ Hand Vice now railes in de merstige vice ui source il propriett out atteres out waters besid tom out deport word out short rolle the street is provided with other runt the previous the form coming out of the pure when sever of if I which but his mount is soil a to sail and can taken strong reserved by planting Athle of land has 25 griss gaining acquired at . arm off of a2 mm 581



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Lodha	Name MARTSM Month And Faculty No. 19194622 Class Batch
34	PIN VICE :-
	PIN VICE: - The Pin vice is used for holding sound meterial of Small diameter Such as wire
	sound merterial of Small diameter Such as wise
	& pine, during working. It also forms a very
<b>M</b>	leseguel handle face Smell files. St Consist of a
	heurdle & a toppeoud nose covering a small coller
	at its end. The churck Cavories the jaws which
	are operated by twoining the handle.
37	Diag. March
9)	PIPE VICE: - The pipe vice is used for holding some Section metal, tubes, pipes etc. In this case, the
	Section metal, tubes, pipes etc. In this case, the
	Come is reguliant & the movable jand weaks
97)	Seedically. Its goips the work at your points on
	its swyaces.
4)	HAND VICE: - The hand vice is used for gripping
	The hand vice is used for gripping
	Swews, nevels, Reys, small to be conveniently
	objects which are sice. The length varies from
	held in the beach the jaw winth yearn 40 to
	The hand vice is used for grapping Societs, seeks, small double & other Similar Societs, seeks, small to be conveniently objects which are too Small to be conveniently held in the bench vice. The length varies from held in the bench vice. The length recom 40 to 125 to 150 mm & the jaw windth recom 40 to
	yu mm.





granding rel hast at Double cutor file: 1 301/ 1824

icing the of the most office the

Corners , some to large , Small wille and other smaller

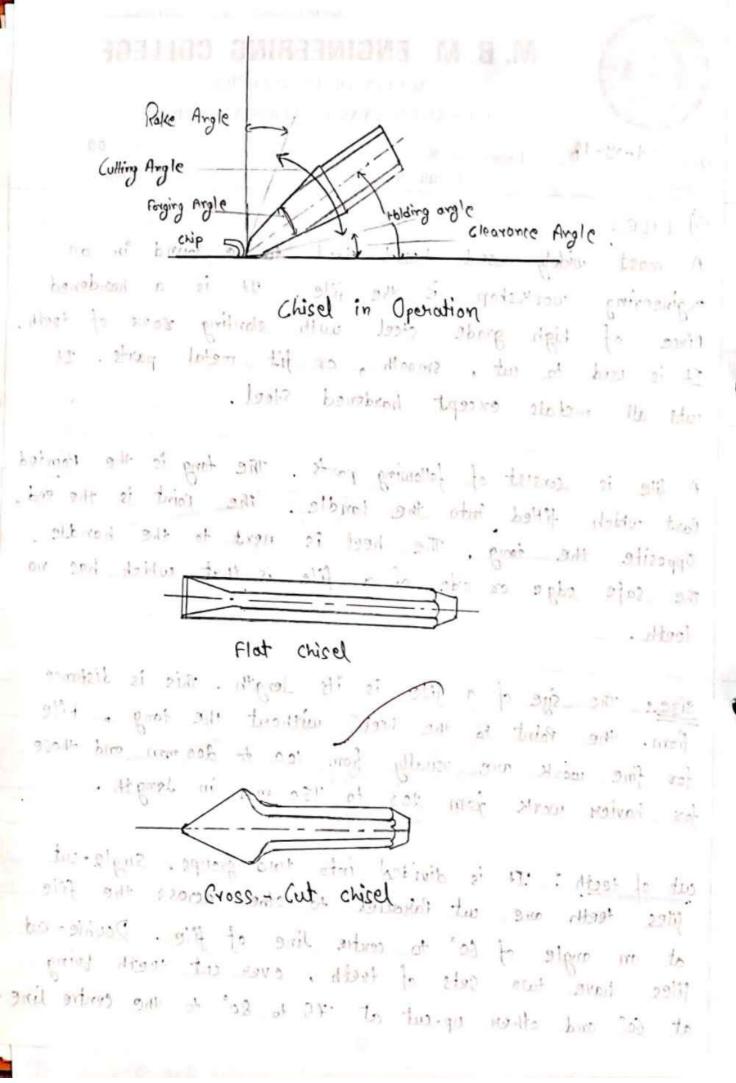
eliate which one on the ite to the conveniently held

bon sport tends the stand to the court of th

oges. The Legal towier from 195 to 150 mm and the



Dea	Date Experiment No
	Name MAREEM ASARAWAS. Faculty No.39/2.362.3
5)	FILE:-
	It most weedly used hand took to be found
	in an engineeoring workshop is the file. It is a
9	in an engineering workshop is the file. It is a howdened piece of high greade steel with standing sources of teeth. It is used to cut, Smooth on fit metal parts, It cuts all metals except handened
	Stows of teeth. It is used to cut, smooth of get
	metal parts, It cuts all metals except moracines
-	Steel
	The tang is the pointed part which fitted into the handle, the point is the end opposite the tong
	The stong is the pointed part which fitted into
	the handle, the point is the end opposite the tong
	the heel is next to the handle.
7	Sing :-
6.	Rize:-
	The Size of a file is its length. His is distance from the point to the heel, without the
	distance from the point to the such account one
	Lang, file four fine nearly are usually ferom
	100 to 220mm.
	Cut of teeth: - It is divided into two groups.
	Single cut giles tooth one cut parallel to other
	Single Cut giles teeth one cut parallel to other across the gile at an angle of 60'





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	Date
Lodta	Name NARESH RURAWAL Faculty No. 19/2.262.2 Class Batch.
7	Single - Cut and double - cut files are fundless divided according to the Coarness or Spacing both the grands of the teeth. In dessending order of coughness they one listed as:
1)	Rough (R) 4.) Smooth (S)
3)	Bastand (B) 5) Dead Smooth (DS)
	Second Cut (sc) 6) Super Smooth (SS)
6)	GHI SELS:-
	Cold chisels are used for cutting &
*,	Chipping away pieces of metal 2 and moide of Caribon Steel usally rectangular, hexagonal and octagonal course. Section. The Cutting angle given to the chisel is determined usually by the nature
	The drisel is Subdivided into Cutting edge & head, I this is generally specified by the length and with a Cutting edge. A 25 mm Cold chisal means a drisel with a 25 mm white cutting edge.
	· · · · · · · · · · · · · · · · · · ·

#### M. B M FRONEERING ONLING

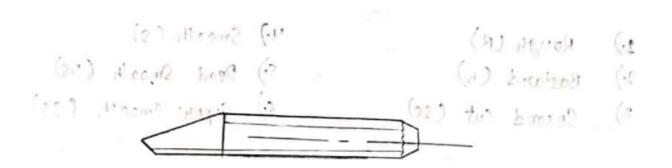




helich and Half Roundar Chisels ald sold has too elegate

Town and manufact principal to remark the publicate

part townships to make publicate all when any principal and the solution of the principal and the solution of the principal and the solution of the solution of



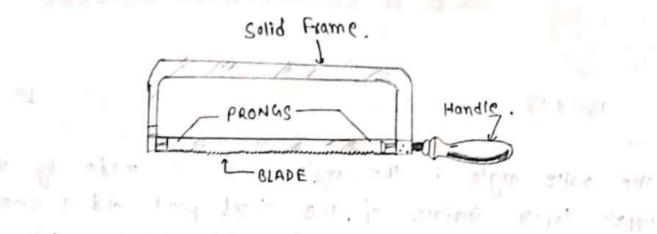
# Diamond - Point chisel

cities of metal and one areas on the consensation of the cities of the c

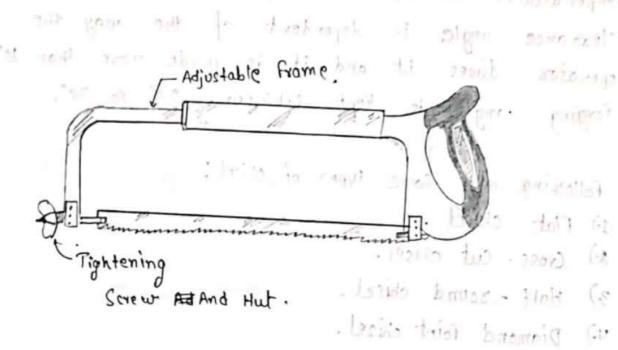
the chief is subdivided in Specified by the deep and and and this is generally specified by the deep in and white of culting sign. It seems told chief means a chief enith a semina wide culting sign.



	P. No10
2	Date
Lodha	NI DISIA IALAM IN FACILITY INC
	To die die augle which is milate of
	the stake angle is sold angle chisel point &
	a line perpendicular to the point of metal
21	
-	the way the operator duives it is
	are using true of
	made more than 10'.
	Folloueing aue Some types of chisel.
	Following all some types of
	O .
1	) Full Chinal
	1 1 CA CALLES
2.	Cross- Cut chisel
	Helf-sound chisel
4	Diamond point chisel
-	diameter p
	Side chisel.
	HACKSAN: -
7	The hocksome is used for Sawing all
	the hairsaint is used for any
	metal except handened steel. A hand hack Sauce
	manno . Manade a Dienax i significant
	Consist & a feeling The
	blade tightly, they are
	moide to make the solid seeams in
	made in two suppos.
	1 1 the lough Campt be changed
	Severe and new and stree blade tightly; they one mode to hold the blade tightly; they one mode in two types: The Soled feeance in which the length cannot be changed a which the length cannot be changed



with a margine letter to make out it we had been expensed



. lorlido obie (2 Different Parts of a Hand Saw

trees before the periods not be at most work and

. glat it should see that at show at south sale

tour of the Armer constitute that A . I was breaken

hardle , groupe, tightening history and not and indee.

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done and oldertage born serrots at donne dipole

strated a family of the test start at and

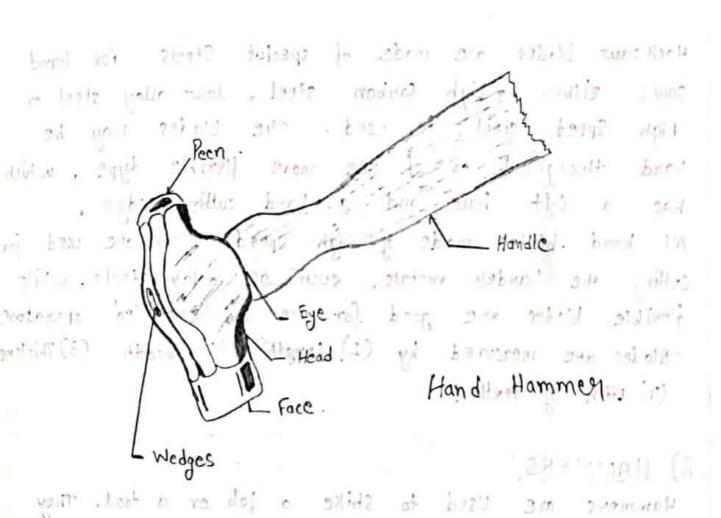


Lodha	Name MARISH AGAMA Faculty No. 13 123 Class Batch
	adjustable frame which has a back that can be
	lengthened on shortened to hold blades of
	disserent length.
>	Hacksaud bleides due moide of Special Steels. face hand Sources either high Carebon steel, Jane
	alloy steel ar high speed steel is used. The
	blades may be haved strenghout on of the
	more flexible type, which has a Soft back
	and a havid Cutting edge.
	All broud blades of high Speed steel one
	used gove cutting the havider metals, such as alloy
_	steels, while flexible blades are good for use by
7	unskilled openators blades aux measured by Dleughn
<b>E</b>	width @ Thickness @ Pitch of teeth.
8.)	HAMMERS:-
	Hammous are used to struke a job ara
	a tool they are made of forged steel of various sizes and shopes to suit barious purpose. A suitable
	sizes and shopes to suit barious purpose. A suitable
	gauge would be seem 0.11 to 0.33 kg face light usock
	Souge would be seem 0.11 to 0.33 kg save light wook - Such as clineling Small rivels and dat punching,
	o. 45 kg gas chiselling.

### W. B. IN ENGINEERING COLLEGE



thereal transfin to asked the of ,



are made of forget shed of invious sines. and

9 gers glabing A 2220 run 2 ment ) into or 25 and

would be from all to a 33 by feet light work

exists of teb box years theme miderally so does

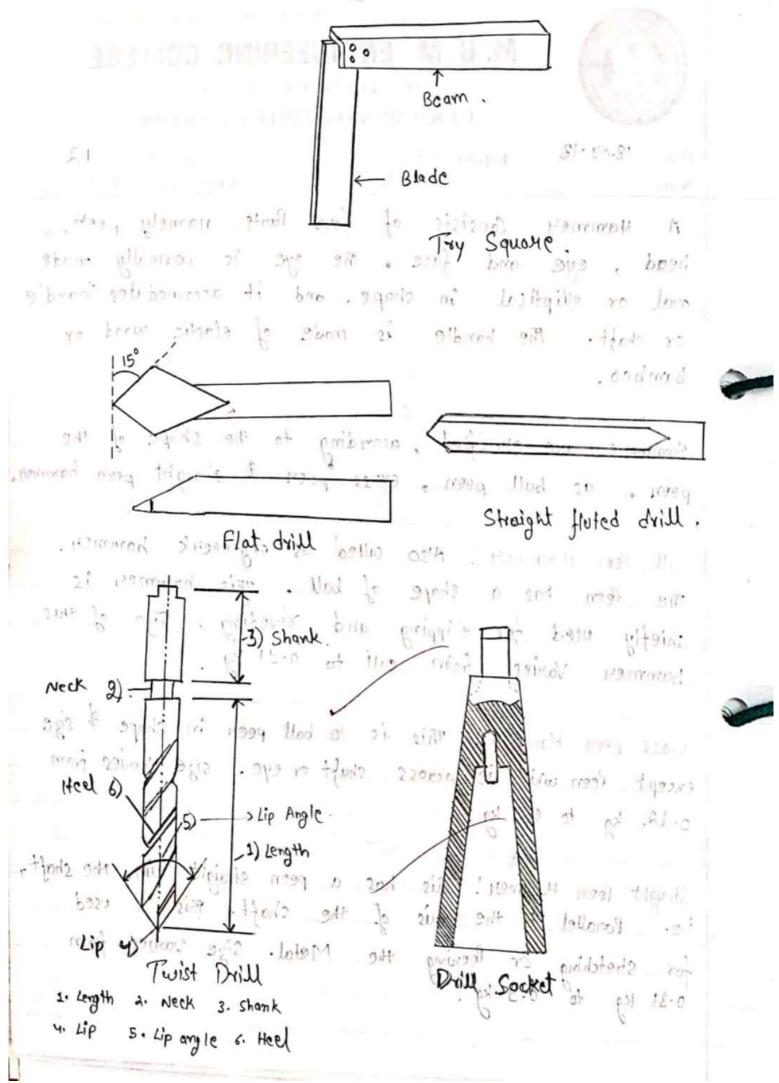
and the chiefling . 2.31 kg for inview work

durad col 19712 riologon of pringing se due

. of EVIL EVIL EVIL press Mrow



	Date
wiha	Name MARISH ALAD ANA Faculty No. 13. 192629 Class Dute
	A hammon anglet or lower parts namely peen, holid,
	Plue daid lave in the
	elliptically in Shape. I it accomposates handle are?
	Shough. The handle is made of clastic wood are
1	ham han:
7	hammens one classified, according to the
	chape of the peens as boll peen, course peen &
	obreight peen hammer.
	Ball peen hammen: Also called as engincers's hammen
	the peen how a shape of pall. this hammen is
	chiefly used for dipping & sivering size of
	This tammas varies perm o.11 to o.91 kg.
-)	
	Cross peen hammer: this is to ball peen in shape
	a sing except peen which is decess short or eye
	Size vaories form 0.22 kg to 0.91 kg.
	straight Peen hammen: this has a peen straight with
	Should be variable to the arms of the stage of
	this is used good storetching are peening the in meterl. Size varies grown 0.31 kg to 0.91 kg.
	motel. Size varies perm 0.31 kg to 0.91 kg.

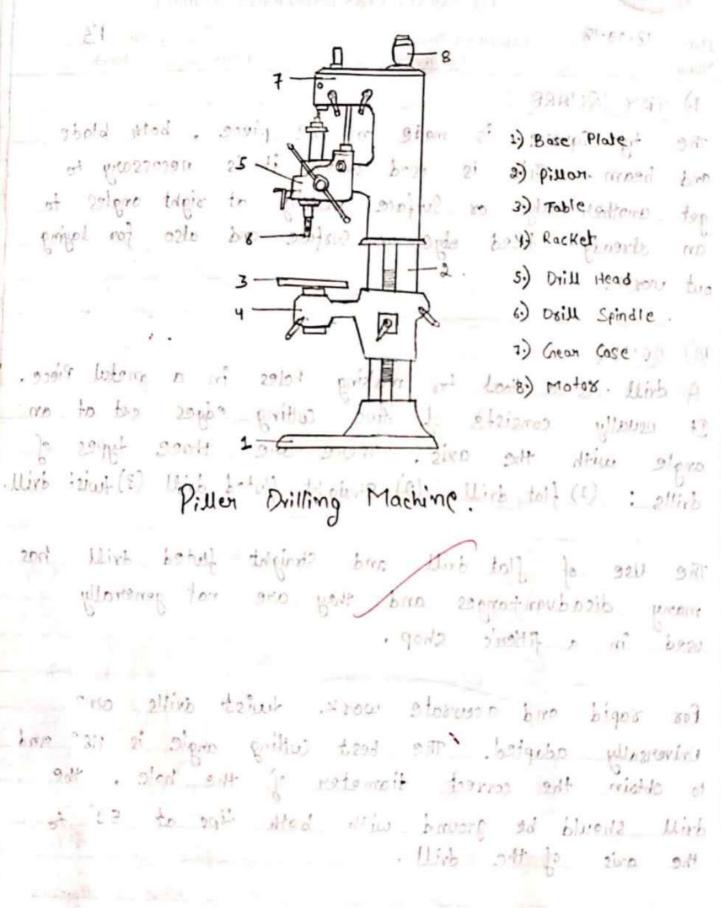


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Lodha	Date. Experiment No. P. No. 13.  Name. MARISH AND AL Faculty No. 19. 20. 20. Class Batch.
බ)	TRY SQUARE:-
->	The Low Square is made in one piece both blode & beam. His is used when it is necessary to get another edge on Surgace exactly at sight angles to an already terred edge on Swyace & also gove laying out room.
10)	DRILLS:-  A decill is a tool for meeting holes in a metal piece. It usually consists of two Cutting Odges set at an angle with the axis. There are 3 types of decills: Oflat decill @ storaight fluted decills.
	The use of flat buill I Sternight fluted devill how many disadvantage & they are not generally used in a filter's shop.
	For propied & accercate weark funist double are universe sally adapted. He best cutting engle is 118° & to obtain the Conocert diameter of the whole.







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odha	Date Experiment No
(1)	There are sure types of surist devill: - Parallel Shank @ tapeould Shank.
	Parallel shank devill can be held in an ordinary Self. Centoning down churk welich have parallel james to held these straight shank devills. They are mede from 0.200 mm to 40 mm Size.
•	In a tempered should be should is topoud a doubt spindle is bossed out with a coursel- ponding toper. when it is necessary to use a doubt with smaller should than the bosse in the Spindle a doubt socket or sleeve is generally used. The doubt are mide grown 3.0 mm to 100 mm size.

# FI STATE OHO. , Flotal Scraper (6) . Street le Vereil (1) De no stant stants delleren (1) & in the Triangulari Scraper. Hell the privation the start blad gio mai oli at mai cof. Half - yound . ent bino bertagol 21 Abronia out Hirb should bertagel in 12 (1) will spinding is bosed out the seed of slbrigh with shoot relien 2 with this of the recognition of the media then the bone in the spirale a drill socket on gleene is generally used. The drills and made from . 9512 mm DC/ et ma 0.9



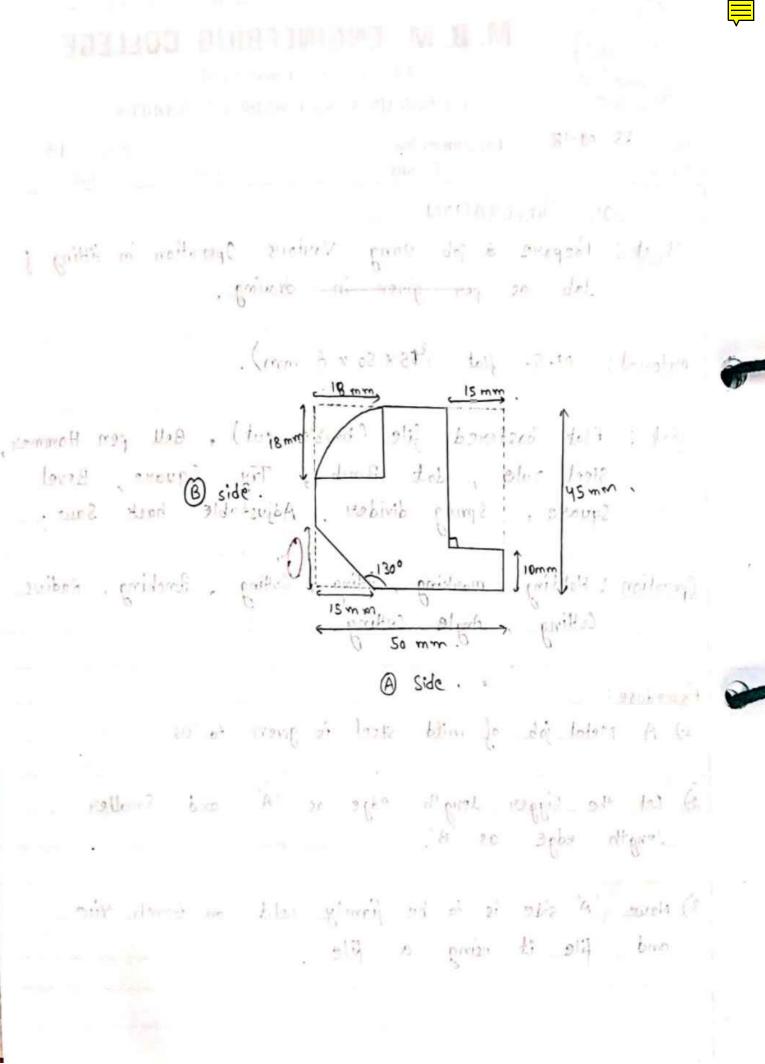
FACULTY OF ENGINEERING

	P. No15
Lodha	Name MARESH AMARESH Faculty No. 13/23623 Class Batch
	NameMAK.EAHHARALAN, Faculty No13.12.36.23
41	
	Scorapes :-
	Scorapping means shaving are paring of
	o company visualis and the contract of the con
	thin slices on glakes of metal to make a
0	fine, Smooth Surgace, this is done with tools
-1 )-	orite & Stricter Strigette Strike
	Called Scorapeus which have very have cutting
	edges. the material is a good quality foreged
	Sages : Sold Trades and the sages of the sag
	Steel and the cutting edge is usually lest home
	Old files make excellent Scrapes, the tooth
	The state of the s
	as the gile must givet be ground aff
	on all Sides. they one then hereted & bent
	to the desired shape & ground to have
_	the cutting edge followed by hardening a temporing. Scrapers are filled with
-7)	O do soon o See record division with
1.8	a semponing. acrapers are filled with
	short, sound handles that git handle
	The state of the s
	Sungly.
	Sucapeu aux made in a Variety of lengths
	Soraper & Lengths
	beom 100 mm upwards and in many shappo
	Jesom 100 mm upwards and in many shapes, depending on the work to be done. These are: toxicing what I help sound.
	difference of 11
	These are sourcing was a helf sound.
	V
K	da sele. en



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Lodha	Date
	JOB PREPERATION: -
मि	Object: - Perepase a job using various operation in fitting lab as per given in decaring.  Material: - M.S. flat (45×50×6 mm)
	Tool:- Flort bastered yele (bouble (ut), Bell pen hammen, Steel rule, dot Punch, Touy Squarce, Spring divideor, Adjustable hach Saus.
$\rightarrow$	Operation: - Holding, marking, fitting, Cutting, Punching, Radius cutting, Augle cutting.
- 1	Poroceduose:-
0	A metal job of mild steel is given to us.
(3)	Let the bigger length edge as 'A' and Smaller length edge as 'B'
3-	A metal job of mild Steel is given to us.  Let the bigger length edge as 'A' and Smaller  Length edge as 'B'  Now 'A' side is to be finitely held on  Beach side & file it using a file.





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Lodha	Name MARISH ALIPAGAL Faculty No. 12173623 Class Batch
4)	
	Now make it that by filling I mark with the divider, Seale, Scriber, hammer L punh the colour.
7	Now 'B' Side is to be signify held on bench vice & file it using a file.
	merke the 'B' side Smooth & rust & corression fere.
7)	Nous date the uppose layer (Susyan) Containing "A" Side view Side & "B" Side in left hound Side & file it to make it smooth as well as sust and Corression force.
	Make the adjacent edges perpendicular to each Side with the help of file & try Square.
9.)	Now sub she half chouck on thet Surgare & allow it so day up to give a plain white Surgare easy fair marking.



	Date Experiment No
Lodha	Name NARISH Aller And Faculty No. 13/04/03 Class Batch
	Name A Like to the King County is a facility in the same of the sa
10)	Now mouk all the dimensions using Seale le vernion height gauge, according to agreem as, given above & with the help of surface plade too.
	Vegnier height gauge, according to digram as
	given above & with the help of surface
-	plade too.
-	
11)	Now using Seale & Swiber mark margin lines of approx 1 mm length. So that it
	may help us to make a peroper & good
	looking job & also to seemove escercos welle
	looking job & also to seemove execces while cutting the job using hacksaw.
13)	Now Using Punch & hammer merck points on
2	Now Using Punch & hammer merik points on The lines which we have plotted as own
10.3	Consect dimension as given in diagram above.
(3)	No voice backsons, at the job using Alice
19)	Now using hacksaw, at the job using the
	Mow, after the feecess of cutting the job using heck saw a the unused metal job, Pieces acce then covered together.
14)	Now, often the fleocoss of acting the job using
	Louk saw , the unused metal job, Pieces acre
	Man Cassered together.
	direct o
30×6	the state of the s
0.54 K	



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Lodha	Name MARISH Maddinal Faculty No. 13.19.2623. Class Batch.
15)	Now finish she job with the telp of file
	Now finish the job with the telp of file
	Nous ouer job is ready.
	Procautions:
· <b>1</b> )	The job (M.S. Flat) is girmly held on bench vice.
(a)	The Leeth of the hocksand should be fairing
<b>Q</b> ,	Marking should be done with great care.
- 1	While Souving allowonees should be made jave filling.
5.	while filing, Caution should be daken that the file move in Storaight stockes & not stanting in any Conditions.
6)	All the edges should be Smooth.



To the	Date
Lodha	NameMAR.Gab
ン	while filing, dimension should be checked again and yile should be used so the job is operapeer dimensions is obtained.
8)	
2	The job is fixed straight in the jaws of the bench vice otherwise escale
3	