

Safety

Monday, May 19, 2008
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#1 SAFETY RULE - STAY ALERT!!!

IF YOU CANNOT, YOU HAVE NO BUSINESS
OPERATING DANGEROUS TOOLS

GREATEST HAZARDS:

1. IGNORANCE OF HOW TOOLS FUNCTION
OR CORRECT USAGE OF TOOLS
2. OVERCONFIDENCE THAT LEADS TO
CARELESSNESS
3. RUSHING OR HURRYING
4. DISREGARDING THE BASIC SAFETY
RULES

1. BE FAMILIAR WITH THE TOOLS YOU USE &
WHAT THEY ARE DESIGNED TO DO
2. USE TOOL GUARDS
3. USE JIGS, IF NEEDED
4. MAINTAIN THE EQUIPMENT; HAND TOOLS
& POWER TOOLS
5. PROTECT YOURSELF; EYES, EARS, LUNGS

PROTECTING YOUR HEARING:

EXPOSURE AT 110 DECIBELS FOR 1 MINUTE
CAN CAUSE PERMENANT HEARING LOSS

20 DECIBELS - WHISPERING VOICE

60 - NORMAL CONVERSATION

90 - MOTORCYCLE, LAWNMOWER

100 - WOODSHOP

110 - CHAINSAW

140 - CONCERTS, FIREWORKS

SOME WOOD DUST CAN CAUSE SKIN
IRRITATION OR ALLERGIC REACTIONS
ALSO PROTECT FROM FUMES OF STRIPERS,
PAINTS, FINISHES, ECT.

WEAR PROPER CLOTHING; HAIR, JEWELRY

KEEP SHOP & WORK AREA CLEAN

SHOP PRACTICES:

1. DO NOT OVERREACH
2. DO NOT STRUGGLE WITH WORK THAT IS
TOO LARGE
3. DO NOT WORK WITH DULL OR DIRTY
TOOLS

4. DISCONNECT POWER WHEN MAKING ADJUSTMENTS
5. DO NOT FORCE CUTS
6. KEEP YOUR MIND ON WHAT YOUR DOING
7. DO NOT WORK WHEN TIRED, UPSET, OR UNDER THE INFLUENCE
8. LIFT ITEMS PROPERLY

BE PREPARED; ACCIDENTS HAPPEN

1. STAY CALM
2. KNOW WHERE THE PHONE IS LOCATED
3. WHERE ARE THE EMERGENCY EQUIPMENT IS LOCATED

HAND TOOL SAFETY

1. KEEP TOOLS SHARP
2. NEVER WORK TOWARDS YOURSELF
3. SECURE WORK IN A VISE OR CLAMP
4. KEEP CLEAN

POWER TOOL SAFETY

1. ALWAYS WEAR EYE PROTECTION
2. DISCONNECT POWER BEFORE MAKING ADJUSTMENTS

3. CHECK POWER CORDS FOR WEAR
4. NEVER USE CHIPPED OR DULL BLADES, KNIVES, OR BITS
5. MAKE SURE WORK IS SUPPORTED AND STEADY
6. WAIT FOR TOOL TO STOP MOVING BEFORE SETTING IT DOWN
7. PROPERLY MAINTAIN ALL TOOLS

FASTENERS

COMMON NAILS - FRAMING

BOX NAILS - LIGHTER CONSTRUCTION, EX. SIDING

CASING NAILS - WINDOW & DOOR

CASINGS

FINISHING NAILS - CABINETS & FURNITURE

BRAD NAILS - CABINETS, FURNITURE, & TRIM

HARD WOODS USE A PILOT HOLE

OFFSET NAILS TO AVOID SPLITTING

NAIL SET TO SINK HEADS OF NAILS

BLOCK OF WOOD TO REMOVE NAILS TO AVOID MARRING WOOD

SCREWS

MORE HOLDING POWER THAN NAILS &
EASIER TO REMOVE

NICER APPEARANCE - USE BRASS IF
SCREWS ARE TO BE SEEN

IF EXPOSED TO WEATHER USE BRASS,
STAINLESS STEEL, ALUMINUM, OR COPPER

SCREW HEAD SLOTS - SLOTTED, PHILLIPS,
CLUTCH HEAD, POZIDRIV, ROBERTSON
TYPE, LOBE - TORX

COUNTERBORE IS USED TO SINK SCREW
INTO WOOD; USE PLUG TO COVER SCREW

MAKE PLUGS WITH A PLUG CUTTER

COUNTERSINK - SCREW HEAD IS LEVEL
WITH WOOD

JOINT FASTENERS

PANEL CONNECTORS - SCREW & SLEEVE
NUT; SCREW PIN & CAM SOCKET;
CROSS DOWEL AND BOLT - FURNITURE
DOWEL SCREWS - THREADED BOTH
DIRECTIONS
CHEVRONS

THREADED INSERTS

WOOD FASTENERS
DOWELS
BISCUITS

ANCHORS
TOGGLE BOLTS
EXPANSION ANCHORS
PLUGS
LEAD ANCHORS
SPLIT-FAST ANCHOR

ADHESIVES
MECHANICAL - BONDING BETWEEN
ADHESIVE & WOOD FIBERS - FILLING PORE
SPACES

SPECIFIC - MOLECULAR ATTRACTION BETWEEN GLUE & WOOD. HAVE OPPOSITE ELECTRICAL CHARGES. FAR MORE STRENGTH OF BOND

CHARACTERISTICS OF ADHESIVES

1. WATER RESISTANCE - WITHSTAND WETNESS
2. HEAT RESISTANCE - SOFTENS WHEN HEATED
3. CHEMICAL RESISTANCE - WITHSTAND CHEMICALS SUCH AS FINISHES, CLEANING AGENTS, ALCOHOL
4. GAP FILLING - FILLING GAPS IN JOINTS
5. CURING TIME - LENGTH OF TIME TO FULLY CURE; STRENGTH OF JOINT
6. SHELF LIFE - LENGTH OF TIME TO REMAIN USABLE
7. POT LIFE - TIME TO APPLY BEFORE IT SETS
8. SET TIME - THE TIME FOR THE SOLVENT TO EVAPORATE

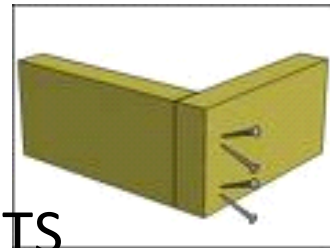
TYPES OF ADHESIVES

1. NATURAL - MADE OF BONE, BLOOD, HIDES, EGGS, MILK, & VEGETABLES. EX. ANIMAL GLUES, STARCH GLUES, CASEIN
2. SYNTHETIC GLUES - DEVELOPED DURING WWII
 - A. THERMOPLASTIC - WATER BASED
 - B. THERMOSETTING - CURE THROUGH A CHEMICAL REACTION. EX. EPOXY, HOT GLUE, POLYURETHANE, CONTACT CEMENT

JOINTS

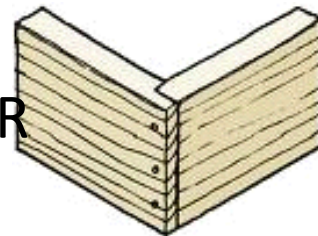
BUTT JOINT -

SIMPLEST
CAN ADD SPLINE, GLUE
BLOCK, DOWELS, OR BISCUITS



RABBET JOINT -

SINGLE OR DOUBLE RABBET
USE DADO BLADE OR ROUTER



DADO AND RABBET JOINT

END GRAIN IS A CONCERN ON
THESE JOINTS. GLUE FOR
STRENGTH



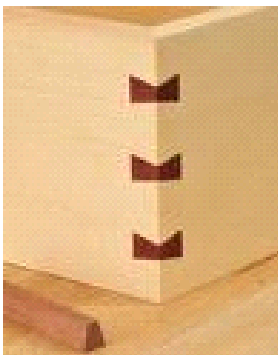
END GRAIN IS A CONCERN ON THESE JOINTS. GLUE FOR STRENGTH



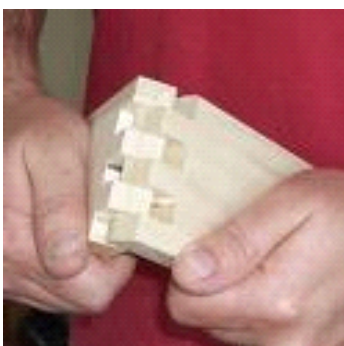
MITER JOINTS

TYPICALLY CUT AT 45 DEGREE ANGLE, NO END GRAIN SHOWING

1. SIMPLE MITER
2. SPLINED MITER
3. BISCUIT MITERS
4. KEYED MITERS
5. LOCKED MITERS



BOX JOINTS - FINGER JOINT
VERY STRONG

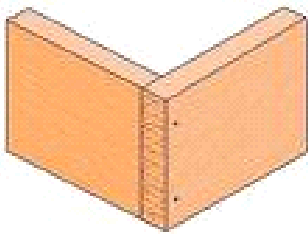


DOVETAIL JOINT - ACTUALLY LOCKS TOGETHER

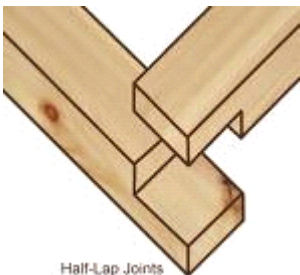


FRAME JOINTS

1. BUTT JOINT -



2. HALF-LAP JOINT



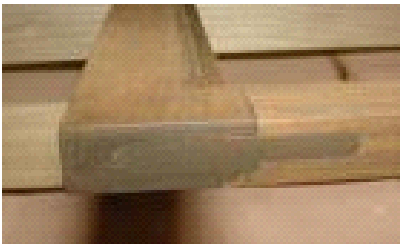
3. MITER JOINT



4. GROOVE AND STUB JOINT



5. COPE AND STICK JOINT



6. SLIP JOINTS

FINISHING PREPARATION

1. REMOVAL OF DRIED GLUE - INTERFERS WITH STAINS & FINISHES
2. SANDING - GO IN DIRECTION OF GRAIN; NEVER SKIP MORE THAN 2 GRITS; DO NOT PUT DOWNWARD PRESSURE ON SANDER
FINAL SANDING SHOULD BE WITH THE GRAIN
SAND PAPER USES THE GRIT SYSTEM
 - REFERS TO THE NUMBER OF HOLES IN THE SCREEN PER LINEAL INCH; 100 GRIT ABRASIVE PASSES THRU 100 OPENING PER LINEAR INCH OR 10,000 OPENINGS PER SQ. INCH

FIXING SCRATCHES & DENTS

1. WATER
2. WATER & HEAT

3. PLUGS
4. IRREGULARLY SHAPED PATCH
5. WOOD FILLER - SANDABLE
6. OIL-BASED PUTTY - WIDE RANGE OF COLORS
7. NON-HARDENING PUTTY - USED AFTER PROJECT IS FINISHED
8. SHOP MADE WOOD PUTTY - SAWDUST & GLUE

WHY FINISH

1. ENHANCE BEAUTY OF WOOD
2. PROTECT WOOD
3. MAKE EASIER TO CLEAN

COLORING WOOD

1. PENETRATING OIL STAINS - EASY TO APPLY; PENETRATES INTO THE WOOD
2. PIGMENTED OIL STAINS - EASY TO APPLY; DOES NOT PENETRATE
3. WATER STAINS - DEEP PENETRATING; INEXPENSIVE; RAISES THE GRAIN; MORE DIFFICULT TO APPLY
4. SPIRIT STAINS - LIMITED NUMBER OF

COLORS AVAILABLE; DOES NOT
PENETRATE WELL; FADES OVER TIME

5. CHEMICAL STAINS - RAISES GRAIN; VERY TOXIC
6. WAX STAINS - NO TOPCOAT REQUIRED; EX. POLYURETHANE
7. VARNISH STAINS - MORE LIKE PAINT; NOT RECOMMENDED
8. LACQUER STAINS - CONCENTRATED & THINNED WITH LACQUER
9. GEL STAINS - THICKER LIKE JELLY

PENETRATING FINISHES

1. LINSEED OIL
2. TUNG OIL - 1ST CUT IS 4:1 MINERAL SPIRITS TO TUNG OIL, PROPORTION OF TUNG OIL IS INCREASED WITH EACH COAT
3. NONTOXIC OILS - USED ON CUTTING BOARDS, BUTCHER BLOCKS, ECT.

BUILT-UP FINISHES

1. SHELLAC - LAYS ON TOP OF WOOD; DURABLE, WILL NOT CRACK, 2 HOUR DRY TIME, EXCELLENT SEALER, NONTOXIC

