

PROBLEM IN IMPLEMENTING HEALTH AND SAFETY MEASURE IN SMALL ENGINEERING FACTORIES

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INTRODUCTION:

Small mechanical engineering factories or workshop can be categories as units caring out 1 or more of the following classification of work.

SHEET METAL SHOP

It usually consist of a shop having the following mechanical

- 1) Guillotine or shearing machine
- 2) Hydraulic double more action press for deep draw operation
- 3) Mechanical or more action pressure or deep draw operation
- 4) Mechanical press power operated or normal used for blanking or shaping operation
- 5) Press brake for bending operations joining operation
- 6) Sheet rolling machines

WELDING MACHINES

- a) Resistance welding
- b) Spot welding
- c) Seam welding
- d) Arc welding
- e) Gas related welding
- f) Oxyacetylene
- g) Co2 welding
- h) Arc welding
- i) Buckle welding



FINISHING OPERATIONS

- a) Grinding
- b) Buffing polishing
- c) Galvanizing
- d) Painting



MACHINING SHOP

- a) Turning operation
- b) Engine lathe
- c) Turret lathe
- d) Caps lathe
- e) Automatic mechanical lathe
- f) C.N.C Turning centre



MILLING OPERATION:-

- a) Milling machine
- b) Horizontal milling machines
- c) Vertical milling machines
- d) C.N.C Milling
- e) C.N.C Machine Centre
- f) Copy milling



SHAPPING PLANING

- a) Shaper machine
- b) Planner machine



GRINDING

- a) Surface grinding
- b) Pedestal grinding
- c) Cylindrical grinding
- d) Centre less grinding



DRILLING OPERATION

- a) Hand drilling
- b) Pedestal drilling
- c) Auto drilling
- d) Multi spindle drilling



FOUNDRY SHOP

- a) Small casting consisting pit format and hand molding
- b) Large foundry consisting of foundry couple with either manual or large units moving automatic molding of canalized molding
- c) Steel foundry having arc furnace
- d) Open arc furnace
- e) Electric arc furnace

FORGING SHOP

Having furnaces, forging hammer, forging furnace specialized operation shapes such as simple heat treatment units to complex chemicals surface hardening

- a) Case Hardening
- b) Annealing

These factories are usually owned by technically trained personal having formal or informal education the smaller units having been setup with owner usually without any bank assistance. Thus short as finance. They are core factories of the engineering industry and form its back bone in Pakistan. They are largely in the unregistered sector. They have usually setup starting small and then adding along the way. This makes them different from process industries which have usually been setup in one go. They produce a large variety of products varying from automobile components air craft part to manufacturer of machine tools and process plant.

HEALTH AND SAFETY RELATED PROBLEM



The smaller units are usually staffed with illiterate or semi-illiterate work force who have usually learned their job by starting as apprentices at a very young age improving their skills. These workers are usually very confident in themselves have little or regard for health safety measures. This is the main problem of these industries. They consider these measure impediments to their efficiency.

The other common problems are:

- 1) Safe guards of machine removed from their places to help in repair as Maintenance.

- 2) Inadequate Exhaust measures in paint shops & chemical based operation.
- 3) Disregards by worker of the use protective Equipment such as gloves goggle, safety shields for welding, apron helmet, etc .The removal or non availability of personal protective guards on machines.
- 4) General this regards for personal safety by workers non availability of bitten protective measures in machine and equipment.
- 5) Lack of general cleanly less.
- 6) Shortage of fire fighting equipment.
- 7) Improper wiring, wrong placement of switches lack of bitten electrical safety measures such circuit barkers, specialized problem concerning
- 8) Wrong placement of machinery
- 9) Despite labor laws and restriction due to economic and other reason these workers starts at a very young age and the hazards of many industries injures their health.
- 10) Their may be same specific problem in various industries

LOSS TO ON INDUSTRIES DUE TO DISREGARDS OF SAFETY MEASURE:

- 1) Personal injury leading to trained workers being laid of causing productions loss.
- 2) Small damages to the plant of machinery causing loss losses
- 3) Major accidents to men and machinery causing huge financial.

If weighted in long term prospects the small financed saving including corners in health safety measure cause much heavier financed lass in the long run.

MEASURE TO BE TAKEN BY MANAGEMENT:-

- 1) As for as financially possible health and safety measure should be taken and equipment provided.
- 2) Wkers be trained in health of safety requirements since of responsibilities be trilled in to them we.
- 3) Strict measures be taken to insure the workers used protective equipment

- 4) Machinery safe guarding equipment must be placed where ever necessary
- 5) It should insure that workers do not remove their equipment in order to enhance their efficiency and supervisory staff must assure that workers are paying attention to their work while operating machinery and not chatting with each other.
- 6) Where ever possible to regular trainee session to in still health and safety and awareness among the workers.
- 7) All electrical equipment must be safe guard
- 8) Where ever possible building safeguard to measure worker safety must be incorporate.
- 9) Regular cleaning of work places must be insure and workers be trained in the habit form cleaning their own work places and their putting scraps etc. at pre designated places.
- 10) The owner should carry out periodic cleaning of their work places.
- 11) In attention of workers to work being done thus causing personal injury