

## GENTLE SHOT PEENING OF ANGULAR SURFACES

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### ABSTRACT

*This device is destined to avoid difficulties with normal Shot Peening. This apparatus has two steel fabricated rolls: one is vertical and other horizontal in front of them are jets for normal Shot Peening. This way is combination of normal Shot Peening and impacting by rolling of two steel roller under angle 90°. This way - impacting – rolling and Shot peening by two jets serving to get better reinforced treated surfaces. Whole mechanism is driven by one small electric motors by axles and gears and available housing: all fixed and making as one compact machine very easy and transferable by hands in scientific research laboratory or workshop. System suction of dust and lubrication is provided for correct function.*

### KEY WORDS

*Gears, bearings, axle, conical transfer, housing electric motor, horizontal and vertical rolls, lubrication, suction, dust, flexible pipe, impacting rolling reinforcement of surfaces, bearing.*

Angular surfaces is very difficult precis treatment by Shot peening. Acces way is big problem because to be together in function. I mean one jet for one area and second for vertical.

In some industruies is necessary to have exact treated vertical horizontal surfaces.

On the fig 1 we see two fabricated rolls exactly installed that covering horizontal and vertical surfaces. In front of each roll is fixed jets for Shot peening and rolls behind going and repairing some glattness of metallic surface after normal Shot peening. Here also we have two operation: the Shot peening by normal shot media following with rolling or we can say here impacting. On this way we can get better performed all operatin called Gentle Shot Peening. Rolling serving for better following and eventual correcting of metallic angular surfaces.

On the figure 1 are presented all items necessary to make this operation. Boths rolls connected and driven by electric motor item 8 with three gears. All these items installed and fixed in one metallic box ready and easy transferable by hands for necessity replacement in workshop. On the fig 2 is possible to see treatment of surface with rolling – impacting angular

surface in same time. Electric motor may be with thyristors. On the Fig 3 is presented this operation Shot peening and impacting.

### CONCLUSION:

For perfect operations without obstacles and other problem manufacturer must assure system suction of dust and adequate lubrication. Before commencement of such operation whole area to be cleaned and removed dirties.

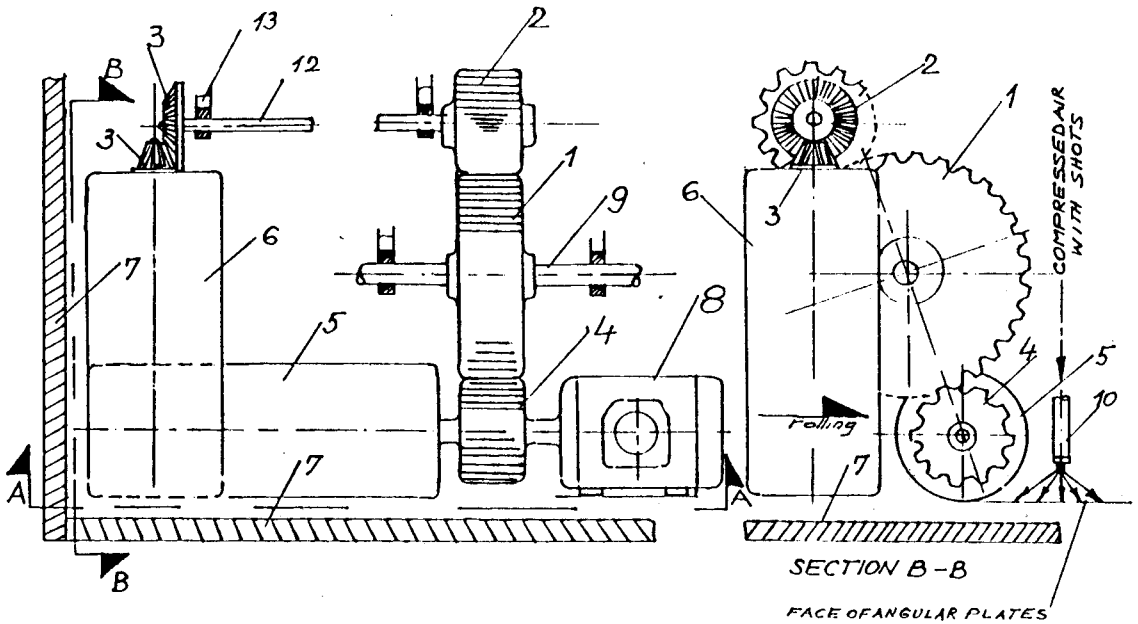
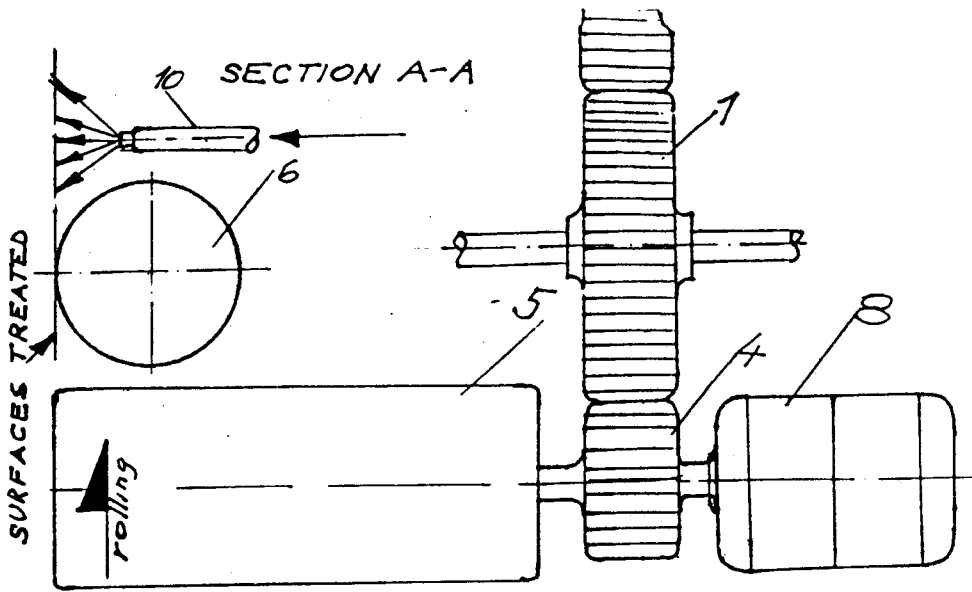


Fig. 1. Angular surface treatment



*LIST OF INDICATED ITEMS ON THE SKETCHES*

- 1 DRIVING GEAR
- 2 GEAR
- 3 GEAR ASSEMBLY
- 4 DRIVING GEAR
- 5 HORIZONTAL ROLL (FOR IMPACTING)
- 6 VERTICAL ROLL FOR IMPACTING
- 7 ANGULAR ITEM FOR SHOT PEENING TREATMENT
- 8 ELECTRIC MOTOR WITH THYRISTORS
- 9 MAIN SHAFT
- 10 JET FOR BLASTING MEDIA
- 11 JET FOR BLASTING MEDIA
- 12 AUXILIARY SHAFT
- 13 BEARING

Fig. 2. Angular surface treatment

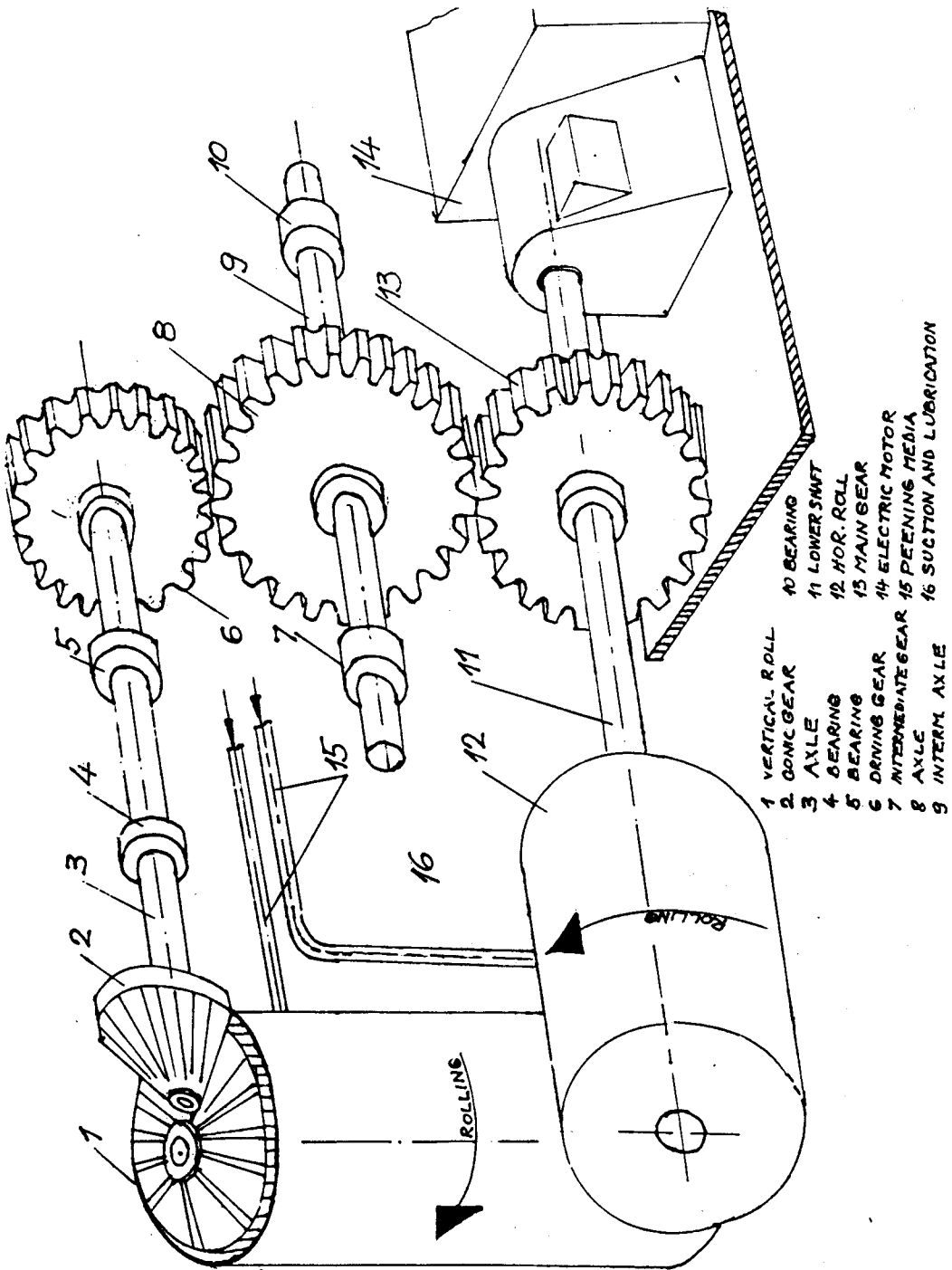


Fig. 3. Angular surfaces treatment shot peening and roll impacting