

No.DGMS(Tech)(S&T)Circular No.5 of 2002

Dhanbad, dated the 16th May, 2002.

To  
The Owner, Agent and Manager  
of all Coal Mines.

**Sub:- Anchorage testing of installed roof bolts.**

Strata control still remains a major problem, affecting safety and productivity in underground coal mines. To control accidents due to fall of roof, the 8<sup>th</sup> Conference on Safety in Mines has recommended use of roof bolts as a method of support in coal mines.

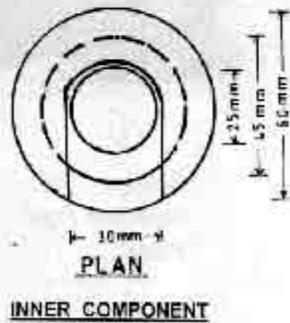
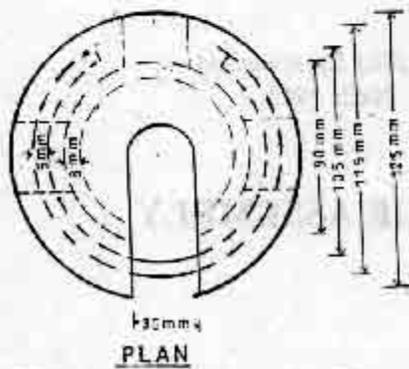
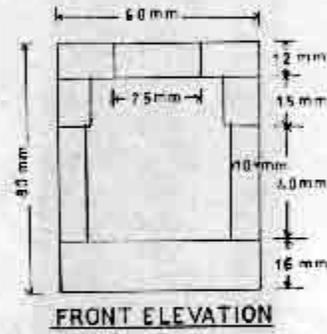
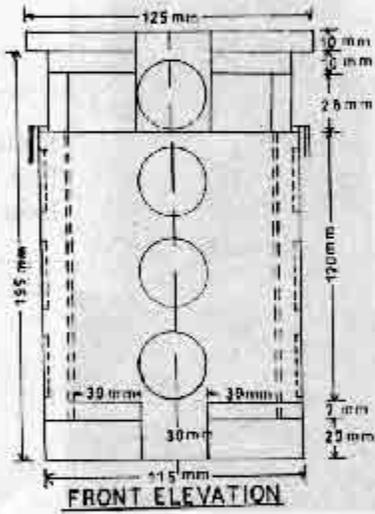
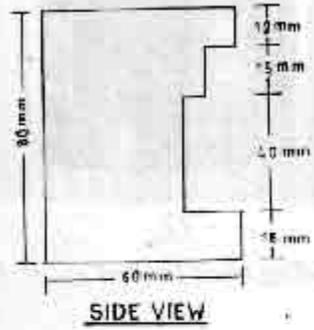
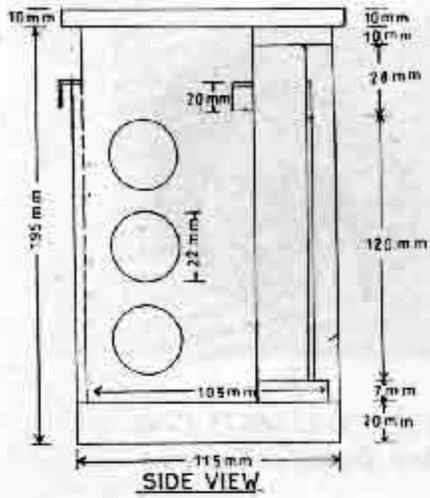
Full colloumn grouted bolts are in use for sometime in underground coal mines. For realizing the full potential of bolting system in reinforcing the roof rock and sides, it is imperative to monitor the performance of the installed bolts by anchorage testing and other means.

During the course of workshops on “Roof bolting practices” by an officer of this Directorate, who actually visited underground and demonstrated the testing, observed that the design of bridge assembly of anchorage testing machines used by many coal mines is not conducive to proper and smooth testing of installed roof bolts. In certain cases, the results obtained was not that of the grouted bolt, but the strength indicated was the strength of the machine itself, as the inner bridge assembly would sit on the outer bridge. There was no way of knowing the situation in the machine provided. The S&T division of DGMS had worked with the manufacturers and suggested certain improvements, which if complied with, would go a long way in eliminating such wrong results.

Two sketches (DGMS/S&T/2002, A&B) of the modified bridge assembly are enclosed. It is requested that immediate steps are initiated to ensure that no anchorage testing machine is procured unless those are of proper design and the existing defective ones should be modified without delay.

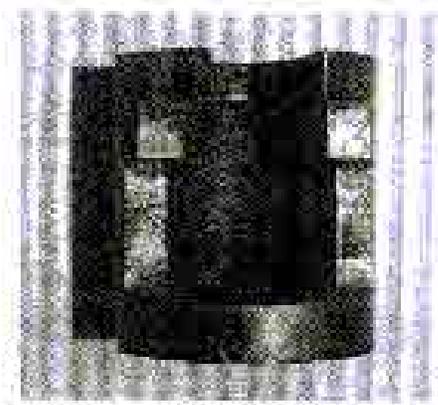
( A. K. Rudra )  
Director General of Mines Safety

Encl: as above.



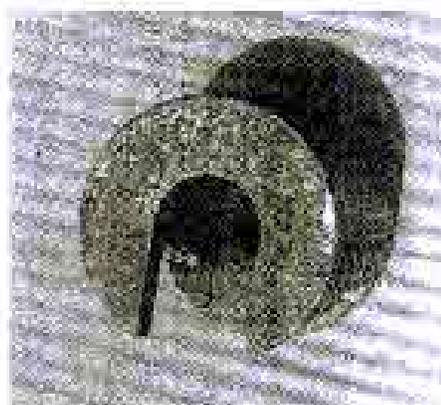
MODIFIED BRIDGE ASSEMBLY

SKETCH No: DGMS/S&T/2002(A)



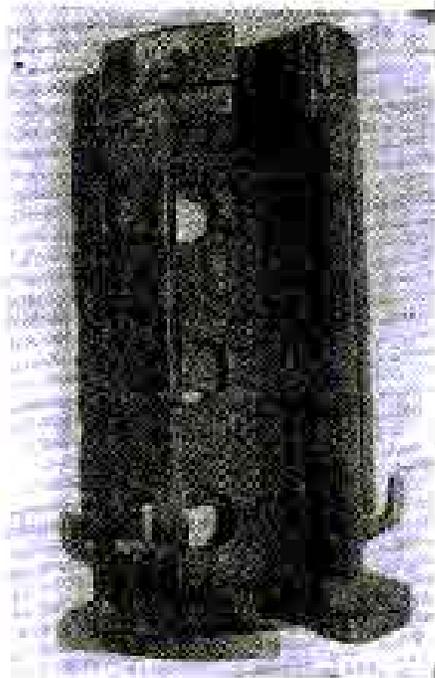
(a)

*Pulling Head for Bolt*



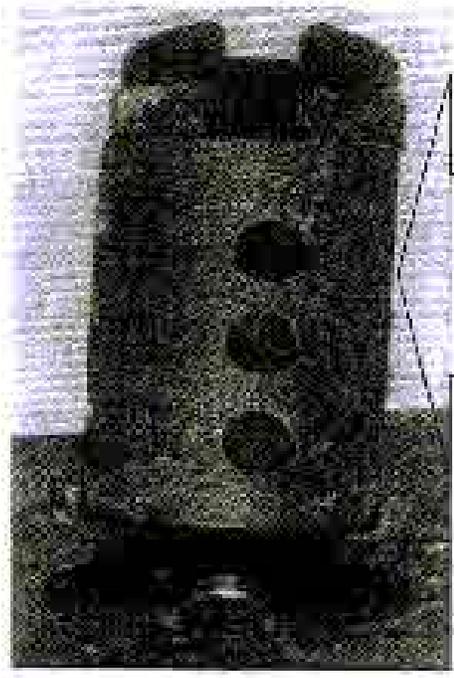
(b)

*Class – 4 IS 1875, C-35 MN 75, C-45  
property Heat Treated & Tempered*



(c)

*Bridge  
Seamless Pipe  
Plate*



(d)

*IS: 3601 latest version  
IS : 2062: 1992*

Sliding  
Flap  
Door

## **MODIFIED BRIDGE ASSEMBLY**

SKETCH NO. : DGMS/S&T/2002 (B)