

**GOVERNMENT OF INDIA  
COAL AND MINES  
LOK SABHA**

STARRED QUESTION NO:7  
ANSWERED ON:19.11.2001  
CENTRAL MINING RESEARCH INSTITUTE  
SANJAY PASWAN

**Will the Minister of COAL AND MINES be pleased to state:**

- (a) whether the Central Mining Research Institute (CMRI) has developed any new technology during the last three years;
- (b) if so, the details thereof; and
- (c) the details of achievements made by CMRI during the above period?

**Answer**

THE MINISTER OF COAL AND MINES (SHRI RAM VILAS PASWAN)

(a) to (c): A statement is laid on the Table of the House, on the basis of information furnished by CMRI, which is under the administrative control of the Ministry of Science & Technology.

Statement referred to reply to parts (a) to (c) of the Lok Sabha Starred Question No. 7 for 19.11.2001 regarding Central Mine Research Institute (CMRI)

(a): Yes, Sir.

(b)&(c): Based on the information furnished by Central Mine Research Institute (CMRI), the details of new technologies developed and achievement made by them during the last three years are given below:

TECHNOLOGIES      ACHIEVEMENT

- 1 Mechanised depillaring of Technology being used by thick coal seam with cable mining companies bolts
- 2 Use of fly ash as mine fill Technology has been demonstrated at laboratory successfully.
- 3 Under-Pinning based method Technology being adopted at of mining for depillaring Chirimiri, Nowrozabad thick contiguous seam mines.
- 4 Delayed bulk filling of Technology demonstrated at open stopes with high laboratory successfully. density cemented fill for pillar extraction
- 5 Subsidence research CMRI getting externally funded projects.
- 6 Subsidence prediction Technology being utilised models for Indian multi- by coal companies seam mining situation.
- 7 Wide Stall method without Technology being used at stowing for partial Chirimiri, Umaria mines. extraction
- 8 Development of wooden Being used by mining spacers for air-deck companies. blasting
- 9 Development of new spacing do and burden formulae
- 10 Dynamic balancing of Coal companies are given pressure technique and the technology through application of cryogenic consultancy projects. technology.
- 11 Methodology for assessment Method has been adopted for of deflagration in-house quality check. characteristics of permitted explosives.
- 1 Methodology for do

- determination of toxic fume  
generated by cap sensitive  
commercial explosives
- 13 Development of explosive            Being manufactured in the  
    brand name of 'INDOBOOST' and 'INDOGEL'
- 14 Fire protective coating            Being extensively used
- 15 On-line mine environmental        At negotiation stage with  
    monitoring system for SSI for commercialization.  
    underground mine
- 16 Arsenic removal from water        Applied for patent; In the  
    process of negotiation for commercialization.
- 17 Mushroom cultivation in        Development completed.  
    simulated abandoned mine  
    condition
- 18 Steel arch setting device        do
- 19 Improved type steel cog            do
- 20 Mechanised device for            Being commercialized.  
    spraying fire protective  
    coating material.
- 21 Strata Movement Warning        System placed in an  
    System                            underground mine        on  
    experimental basis            and working well.
- 22 Roof Bolting machine            Already patented.
- 23 Coal Slasher                      Already patented.
- 24 Coal Sampler                      Already patented.
- 25 Improved device for            Being manufactured and  
    temperature measurement in    supplied to coal mines.  
    hazardous environment.
- 26 Computerized package for        Lab model/ proto type  
    equipment                      condition developed for field trial  
    monitoring.
- 27 Universal                      un-interrupted        Proto type developed    for  
    power pack                      field trial.