- Manual loading is being replaced by deployment of SDL/LHD and re-organization of transport system wherever feasible.
- 18 abandoned mines with estimated reserves of over 1600 MT of high quality coking coal and thermal coal have been identified for developing under a joint venture agreement with association of global underground mining companies.

SCCL

- Two high capacity (2.0 MTPA) Long-Wall projects are under construction.
- Two continuous miners are working to liquidate the standing pillars and virgin coal seams.
- 100 tonnes capacity dumpers and 12 cubic meter shovels have been introduced in open cast mines.

Mining Tribunals in the country

*258. SHRI SYED AZEEZ PASHA: Will the Minister of MINES be pleased to state:

(a) the number of Mining Tribunals in the country;

(b) their locations and objectives;

(c) who are the *ex-officio* members of the respective benches;

(d) how often the Tribunals meet;

(e) whether it is a fact that there are long delays in getting hearings at the Tribunals; and

(f) the steps proposed by Government to utilize Tribunals to regulate and control the monopolies recently created in the mining sector?

THE MINISTER OF STATE OF THE MINISTRY OF MINES (SHRI DINSHA J. PATEL): (a) Section 30 of the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) confers powers on the Central Government to revise any Order made by the State Government or other authority in exercise of powers conferred on it by the Act or under the Rules made thereunder for minerals other than minor mineral, of its own motion or on an application made within the prescribed time by an aggrieved party. Thus the power of Revision lies with Central Government as per the MMDR Act, 1957. There is no Tribunal prescribed under MMDR Act or any Rules thereunder.

(b) to (f) In view of (a) above does not arise.

Needless drug delivery device of IISc.

*259. SHRI A. ELAVARASAN: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the scientists at the Indian Institute of Science (IISc) have designed a technology, a pen shaped needleless drug delivery device, that uses supersonic shock waves for the painless delivery of medicines into the body;

(b) if so, the details thereof;

(c) whether IISc is the only organization that has developed such a device in the world using supersonic shock wave technology; and

(d) if so, the details thereof?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI PAWAN KUMAR BANSAL): (a) and (b) Yes, Sir. The scientists at Indian Institute of Science (IISc), Bangalore have developed a needleless vaccine delivery system and successfully delivered Typhoid vaccine into mice in the laboratory. This new method has been developed based on the collaborative work between the Laboratory for Hypersonic and Shock Waves, Department of Aerospace Engineering and Microbiology and Cell Biology Department of Indian Institute of Science. This new method of drug delivery is in its early stage of development and it needs to go through more scientific studies for device prototype development, clinical validation and regulatory approval before the device is commercially available for human use.

(c) and (d) Yes, Sir. IISc is the only organization which is using shock waves generated through micro-explosions that travel at supersonic speed for needleless drug delivery. This method utilizes the instantaneous mechanical impulse generated by micro-blast waves to achieve sub-cutaneous delivery of vaccines into mice. The micro-blast wave is generated inside a small disposable plastic tube (3 mm diameter) using negligibly small amount of chemical energy (few Joules). Appropriate mechanical fixtures (disposable) are used to transfer the mechanical impulse to push the liquid drug to depths of 100 microns below the skin of the mice.

Foodgrains storage capacity

*260. SHRI NARESH GUJRAL: Will the Minister of CONSUMER AFFAIRS, FOOD AND PUBLIC DISTRIBUTION be pleased to state:

(a) the total requirement of foodgrains storage capacity in the country;

(b) the total storage capacity for foodgrains in the country as on 31 December, 2010; and

(c) how much capacity was added during the last calendar year?

THE MINISTER OF STATE OF THE MINISTRY OF CONSUMER AFFAIRS, FOOD AND PUBLIC DISTRIBUTION (PROF. K.V. THOMAS): (a) and (b) The overall storage capacity for foodgrains available with FCI both owned and hired from different agencies including Covered and Cover and Plinth (CAP) was 306.12 lakh MTs as on 31.12.2010.