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... matters in Maharashtra. ... about naming Patil, the Prime ... said, "It is not good. We ... up it. We have spoken to him ... will not do it again." ... Prime Minister was replying ... tions from reporters after the ... reshuffle of his Cabinet at the ... pati Bhawan this evening.

Since the very word Bofors has become a bugbear with the Government, no one is willing to confirm or deny the story. There is not even the usual reply of "no comment" available.

AMMUNITION ITALIAN

Experts believe that there is nothing wrong with the guns. It is the ammunition which has affected the

... economic editors in Delhi a few days ago and he saw no harm in having done so.

WIDER RAMIFICATIONS

Arun Singh's resignation from the Defence Ministry is reportedly a sequel to the cancellation of the delegation's visit. Incidentally, a mutual friend, a former editor, tried to intervene requesting Arun Singh not to

... both the Opposition and the Congress(I) dissidents are preparing themselves to train their guns on the Bofors deal in the coming session of Parliament. A common strategy is being worked out. The impression is that the deal has wider ramifications than first thought. V. P. Singh told reporters at his residence the other day that the Bofors report had vindicated his stand on the issue of kickbacks, commissions etc.

... India was likely to provide the necessary weapons to Sri Lanka to combat terrorism.

He denied that any one of the government military bases in the north and east would be removed.

"The government would retain the power to remove the Chief Minister of the combined Tamil region's ruling council if the need arose".

Dismissing criticism that the agree-

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Ratanahalli

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Metallurgical Laboratory.

Very high security is maintained at this facility, with special watchmen, laser beam linked alarms, and a sophisticated identity checking system, for the few who are allowed to enter.

And the Dhruva reactor, at BARC Trombay was designed as a weapons grade plutonium factory. It takes 6.5 kgs of plutonium for a bomb. Dhruva, if fully operational, is designed to produce 25 kgs a year. It is designed for no research; nor is it a power reactor.

Dhruva's fuel cycle is chosen for a single purpose. For instance, compared to Tarapur, where fuel rods are inserted for 15,000 megawatt days a tonne — which is optimum for power — Dhruva has a fuel cycle of only 1,000 MW days. This is ideal for the highest concentration possible of the fissile — bomb-making — isotope of plutonium, plutonium 239.

Officially there is no nuclear weapons programme, and the Rare Materials Plant does not exist. The current Annual Report of the Department of Atomic Energy devotes an entire chapter to Indian Rare Earths discussing its profitability, export performance, Research & Development and its Orissa Sands Complex. But not a word about its most important project, the Ratanahalli Rare Materials Plant.

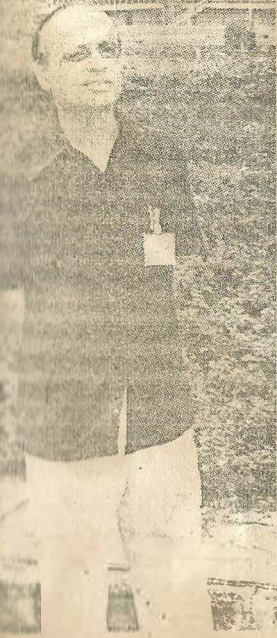
Yet in typical public sector fashion, IRE tenders have been published in the major newspapers for virtually every item to be procured. And the Defence Laboratories cannot resist boasting every technological accomplishment.

Several hundred crore rupees has been sanctioned toward the Ratanahalli project.

ROCHA

Ratanahalli — India's Kahuta

Kannan Srinivasan on India's plans to beat Pakistan to the bomb.



of the Indian Bomb? K. Srinivasan

Pakistan's N-bomb programme is a matter of intense debate and speculation but what about India's N-bomb programme? The PM has repeatedly answered this question with an enigmatic — "the appropriate steps are being taken."

Fact is that India's N-bomb programme began before Pakistan's, and is considerably more advanced. This superiority holds true in virtually every area of nuclear technology. Pakistan has just made an unsuccessful attempt to acquire maraging steel — a special alloy used to make uranium centrifuges.

But India has embarked some time ago on full industrial production of maraging steel. On December 28, 1986, Dr. V S Arunachalam, Scientific Advisor to the Defence Ministry stated that Mishra Dhatu Nigam, the defence public sector undertaking was smelting this in large quantities at its Hyderabad plant. Similarly, we have heard much about

Pakistan's pilot enrichment plant at Kahuta.

But India's full scale enrichment facility — euphemistically called the Rare Materials Plant — is being built at Ratanahalli, 20 kilometres from Mysore, in Karnataka. It is nominally

Research Centre (BARC) — who was just superseded for the post of Chairman Atomic Energy Commission, by Dr. M R Srinivasan, former head of the Nuclear Power Board.

In 1974, immediately after the

India's full scale uranium enrichment facility is being built at Ratanahalli, 20 km from Mysore. Five thousand centrifuges will be set up there.

a part of Indian Rare Earths Limited, (a public sector corporation of the Department of Atomic Energy) and under the nominal charge of R K Garg, Chairman of IRE.

The entire programme is the brainchild of Dr. P K Iyengar, the Director of the Bhabha Atomic

"peaceful nuclear explosion" at Pokhran, work on the pilot plant began at Engineering Hall One, Trombay. One hundred centrifuges were put up there. The fissile — bomb-making — isotope of uranium, U-235, exists in a concentration of 0.7% in natural uranium. About 90%

enrichment is required for a nuclear weapon.

In early 1984, the pilot plant achieved enrichment of 3-4 per cent. Opposite Engineering Hall Seven was the original site for the intermediate scaling up of the pilot plant — by fifteen times. However this stage has been skipped. They are scaling up the pilot directly on site at Ratanahalli — fifty times. So about five thousand centrifuges will be installed there. The Hall seven site will merely provide back-up R & D for the main project.

At any large enrichment facility, uninterrupted high frequency power is a prerequisite: this is guaranteed at the Ratanahalli complex. If that power fails, there is diesel generation; and as a third stand-by, large banks of battery motor generators are to be built.

The second route to the bomb is plutonium. India has stockpiled 60 kgs of plutonium from the 40 MW. Cyrus reactor at BARC, Trombay. It is stored nearby, at the Radio

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