

containing no explosives (8). It provides safe destruction with minimal pollution of the environment, in accordance with the standards effective in the USSR. KUASI technology is based on the method of chemical agent detoxication by suitable reagents followed by incineration of produced reaction masses. This system was used for the destruction of more than 4000 munitions of various calibres, filled with sarin, soman and VX, in the period of 1980 - 1990.

III - DESTRUCTION OF OLD/OBSOLETE STOCKS

If the destruction of military stockpiles of CW is a difficult one, from contributions by Germany, Italy and Belgium, it became clear that the destruction of old/obsolete stocks causes particularly difficult problems. This is mainly caused by a number of factors particular to these "weapons" :

- it is sometimes very difficult to differentiate between chemical munitions and conventional ones, due to their very bad state, in particular external corrosion
- for the same reason, it is sometimes difficult to identify the precise origin of CW
- the explosive charges are sometimes extremely difficult, and in some cases impossible to remove, the priming cap being sometimes active
- the chemical agents come in an enormous variety, sometimes in very complex mixtures (in particular agents and explosives) ; in Belgium alone, at least 50 different agents were identified (HD, HN1, HN2, L1, L2, L3, phosgene, phenyl dichloroarsine, etc.)
- the variety and the presence of arsenicals in different forms complicate the destruction process, and large amounts of toxics end products are formed
- findings of munitions are completely unpredictable, so planning destruction processes is hardly possible
- each munition has to be handled individually and extremely carefully which does make the destruction program necessarily a lengthy one.

A great deal of study still has to be carried out, but, despite these difficulties, the solutions presented at the Seminar are certainly impressive.

In Germany, a large variety of CW munitions, accidentally or systematically recovered in the past four decades, require individual assessment by explosives ordnance disposal personnel of their condition prior to destruction. After removal, transportation and intermediate storage, in which a number of stringent standards are met, the munitions have to be cleaned and details are