18 November 2020

**RHEINMETALL DENEL MUNITION: ACCIDENT UPDATE**

**INTRODUCTION**

On the 3rd of September 2018, an explosion at Rheinmetall Denel Munition in Somerset West, in the Western Cape killed 8 workers. Rheinmetall Denel Munition (Pty) Ltd (RDM) is jointly owned by Rheinmetall Waffe Munition GmbH of Germany (51%) and Denel (Pty) Ltd. South Africa. It specializes in the development, design and manufacture of large- and medium-calibre ammunition families and is also a leader in the field of artillery, mortar and infantry systems as well as plant engineering. Rheinmetall Denel Munition also manufactures products such as artillery ammunition, mortar bombs, rockets and missile sub-systems. Rheinmetall Defence’s business is mainly focused on NATO countries and on Asia, the Middle East, South America, South Africa and African countries. In South Africa the company has four sites - in Somerset West, Wellington, Potchefstroom and Boksburg. RDM has a complement of over 2500 workers in South Africa, of which 682 are based in Somerset West.

**HISTORY OF RDM**

Rheinmetall Denel Munition (Pty) Ltd was established on September 1, 2008 when the Denel divisions comprising of Somchem (Somerset West and Wellington sites), Swartklip, Boksburg and Naschem became part of the Rheinmetall Defence Group. The company became known as Rheinmetall Denel Munition (RDM) with Rheinmetall Defence being the majority shareholder, while Denel holds 49% of the shares.

Somchem was bought by the Armaments Corporation of South Africa (Armscor) in 1971 from AECI (African Explosives and Chemical Industries). During 1992 Armscor was split into two entities; the Armscor Procurement Agency of the Department of Defence and Denel (Pty) Ltd, which incorporated the defence manufacturing companies within South Africa. Somchem operated from Somerset West outside Cape Town with a chemical factory for raw materials at Krantzkop, close to Wellington in the Western Cape. Since then the company has grown to become a global player with a vision of being the best in solid propulsion products and energetic material applications.

Swartklip Products originated from the Ronden Manufacturing Company which was established in 1948 and manufactured fireworks. These pyrotechnic products led to the development and manufacture of new products such as railway signalling detonators and military products. The company was bought by Armscor in 1971 and named Swartklip Products. Since 1992 Swartklip became a division of Denel and shifted its business focus to the international arena. Swartklip has twice been awarded the chemical company category of the Technology 100 competition.

Naschem originated from the Lenz Factory which was used as an in explosives depot for the gold mines in 1896. During World War II the Lenz facility manufactured 25 million piece of ammunition for the North African Campaign. The facility was rejuvenated in 1970 as a result of South Africa’s need for self-sufficiency in the armaments field and the company Naschem came into being in 1978. During 1992 Naschem became a division of Denel (Pty) Ltd operating from the Boskop site near Potchefstroom.

Boksburg – the current facility was bought by Denel from Cemenco Holdings in 1996 and was included in the transaction of the new company Rheinmetall Denel Munition (RDM).in September 2008. Boksburg manufactures forged shell bodies and metal components of outstanding quality.

**THE RDM ACCIDENT**

On the 3rd of September 2018, eight workers lost their lives during operations at one of the depot's units at Rheinmetall Denel Munitions in Somerset West. A three-pronged probe was launched following the incident comprising the Department of Labour & Employment, the South African Police Service and as well as an “independent” investigation by the arms manufacturer (RDM) itself. After a long investigation, the internal report by RDM concluded that the accident was as a result of both a human error and an electrostatic electricity risk.

According to the report, the N16 building, where the incident occurred, was used for blending large volumes of propellant from smaller sub-lots. At the time of the incident, sub-lots of single base propellant were being blended into one homogenous final lot. Propellant had been safely blended at the N16 facility since it commenced operations in the 1980s without any incident. According to the company, all members of the team were fully trained, and the team leader and supervisor both had extensive experience with the material and the operations being executed at the time of the incident.

However, during the mandatory routine testing of sub-lots in the course of the manufacturing process, that one sub-lot did not meet the required quality standards. According to RDM, “this particular type of electrostatic electricity risk was, as far as the investigation team has been able to determine, a previously unidentified and unforeseen hazard across the industry internationally.” Having realised that a component in the propellant mixing process did not meet the required quality standards, it is claimed that, workers tried to compensate for this by adding extra graphite to the propellant mixture. According to the CEO, this, coupled with the electrostatic electricity build-up, ignited the mixture. However, investigators believe “this would have been highly unlikely for the deceased to foresee.”

**CONCLUSION**

In the absence of the other reports, both from the South African Police Services and the Department of Labour and Employment, it is difficult to know what exactly happened. The RDM report seems to absolve the company of any wrongdoing and they seem unprepared to take any responsibility for the disaster. As expected, the families of the deceased and the community at large have rejected the findings by RDM. In one of the public meetings that they have had to date, they raised concerns about the very location of the factory. According to some community members, putting a factory of that magnitude in the middle of the community puts their lives at risk and requires an investigation into the water and air quality in the area. As for the cause of the accident, it seems like it will only be clearer once all outstanding investigative reports have been tabled.