

Lettre du



Newsletter

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GIAT Artillery Ammunition Meets MURAT 1* Standards

In 1999, the French National Explosive Safety Authority (IPE) classified the 52 caliber artillery shell LU 211 developed by GIAT Industries as MURAT*. Nevertheless, the main objective of GIAT Industries was to offer a complete round, which met the French MURAT Policy requirements, meaning that the complete propelling charge had to be compliant with a MURAT* label.

Under a contract awarded by DGA, GIAT Industries (in collaboration with SME as the main subcontractor) is developing a modular charge system (MCS). This MCS is dedicated to the new generation of 52 calibers artillery system, such as CAESAR and 155 mm AUF2, designed by GIAT Industries. A module consists of a combustible case, a propellant and a center core ignition device.



LU 211

The IM tests have been performed on the unpacked module, according to the STANAG procedures.

All the requirements for a MURAT* label, have been fulfilled, and the certificate was delivered in 2002 by IPE.

So far, the Modular Charge System is compliant not, only with the French MURAT policy requirements, but also with the NATO Joint Ballistic Memorandum of Understanding requirements.



Modular Charge System for the 155mm Artillery Shell

The IM results (Top Charge Modules) are presented in the following table:

IM TEST	REFERENCE	TCM REACTION
Drop Test	STANAG 4375	NR
Fast Heating	STANAG 4240	V
Slow Heating	STANAG 4382	IV
Bullet Impact	STANAG 4241	IV
Light Fragment Impact	STANAG 4496	IV
Heavy Fragment Impact	STANAG 4496	III
Sympathetic Reaction	STANAG 4396	No detonation of the donor.

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Article provided by GIAT Industries

IMMURAT EUROPEAN MANUFACTURERS GROUP (IMEMG)

A European Industry Association for the Promotion of "Insensitive Munition" has been created.

On May 21st 2003 in Paris, France, the relevant European industries launched a new community of interests:

Twelve companies, active in the field of insensitive High Explosives, Propellants, Warheads, Ammunitions and Guided Weapons, founded an association, whose main duty is to promote increased employment of Insensitive Munitions (IM).

Dr. Helmut Muthig from TDW, Germany, was elected as the first President of this European association.

Starting Point

Despite the obvious benefits of using Insensitive Munitions, only a few nations pursue a definite policy dictating the obligatory employment of IM. If there is a policy, the assessment is performed according to the prevailing national rules because no common standardized international criteria exist. Industrial companies responsible for munitions in international programmes are still up against different national approaches, and "IM"-ness is not yet visible when Forces act together in joint operations.

Initiative

To contribute to the improvement of this situation, on May 21st 2003 twelve companies from three European countries founded a community of interests to promote the use of IM.

The name of the association is

"IM/MURAT European Manufacturers Group" (IMEMG).

The objectives of the Group are:

- a) To foster enhanced synergy amongst its members and bring to each participating member a better visibility of the IMMURAT market.
- b) To aim to have a stronger influence on international agencies than national groupings might have.
- c) To assert the importance that its members attach to the IMMURAT.
- d) To harmonize information and individual positions regarding standards, specific requirements and state-of-the-art.
- e) To promote IMMURAT to the Procurement Agencies, and to inform and guide the Armed Forces.
- f) To obtain contracts to further the aims of the group (e.g. feasibility studies, IMMURAT analysis, theoretical evaluation, STANAG application

proposals, contractual definitions, etc.) and to propose studies and tests to meet potential customer's requirements in the IMMURAT field.

History

In France the need for promotion of the idea of Insensitive Munitions on a national level had been identified long ago, and in 1992 those companies active in the field of Insensitive Munitions joined together to form the so-called "Club Murat" (MURAT is the french acronym for "MU nitions with ATtenuated Risk"). Its objectives being the promotion of "IM"-ness.

In 1996 the European Organization for Joint Cooperation in Armaments, known by its French acronym OCCAR (Organisation conjointe de coopération en matière d'armement), was formed under the signature of an Administrative Arrangement to assist the creation of a European defence equipment capability.

Club MURAT picked up the idea of making "Insensitive Munitions" a European issue as well, and in 1999 contacted the relevant companies in Europe. Former NIMIC Programme Manager, Michel Thévenin, was appointed by Club MURAT to establish the initial contacts with industrial companies working in that field.

Companies from the four OCCAR Nations (France, Germany, Italy and the United Kingdom) were invited to found a European Pilot Association.

As from August 1st 2000 the "Pilot Insensitive Munition European Manufacturers Group" (pIMEMG) was created with 10 founding companies from 3 nations (France, Germany, UK). The task of the pIMEMG was to elaborate structures for a permanent organization after an appropriate transition phase. During that phase companies from Italy also joined the pilot association and contributed to the definition of the statutes. As there are still no common European regulations for non-profit associations, the representatives from France, Germany, and UK agreed on an association governed by the French "Law of July 1st, 1901". This allowed a certain amount of flexibility in forming the organization frame.

Finally, after clarification of all legal aspects and translation matters the "IMMURAT European Insensitive Manufacturing Group" (IMEMG) was established on May 21st 2003, with founding members mentioned hereafter.

Short term Working Plan

In the coming months IMEMG will refine its creation activities and spend its main efforts on communication

within the IM community. Expert working groups will be set up in order to deal with potential issues such as:

- Hazard Division Assignment for IM to make IM visible
- Quantity/Distance Determination in order to contribute to logistic gains
- Cost Benefits Analysis
- Inventory and rating of IM Technologies to highlight shadow zones

IMEMG will be open to a close relationship with NIMIC in order to contribute to making the use of munitions safer and safer within the Forces.

Members

Members at the time of foundation are the following companies:

France (Members of "Club MURAT")

- CEA- DAM
- GIAT Industries
- MBDA-France
- PROTAC SA
- ROXEL, SAS
- SNECMA Propulsion Solide
- SNPE Matériaux Energétiques
- TDA Armements SAS

United Kingdom

- BAE SYSTEMS RO Defence
- MBDA UK Limited

Germany

- Rheinmetall W&M GmbH
- TDW Gesellschaft für verteidigungs-technische Wirksysteme mbH

The Membership of additional companies will be most welcome!

Representatives

At the Creation Assembly the following representatives were elected:

President: Dr. Helmut Muthig, TDW, Germany
 Secretary: Henri Miermont, MBDA-France, France
 Treasurer: Patrick Malbo, TDA Armements, France

As additional members of the "Board of Directors" of the Association the Vice Presidents of the represented nations have been confirmed:

Vice President France: Henri Miermont, MBDA-France, France
 Vice President Germany: Dr. Paul Wanninger, Rheinmetall W&M, Germany
 Vice President UK: Ron Scott, MBDA UK Ltd, United Kingdom

For any questions, comments or suggestions please contact: imemg@imemg.com

Helmut Muthig
 President of IMEMG

NDIA & NIMIC

The 2004 IM&EM Technical Symposium

The next conference will be held in October 2004 in California.

More information will be released as soon as the exact location and dates are confirmed, and details will be available **ONLINE** at www.ndia.org/events

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ACCIDENTS INVOLVING MUNITIONS AROUND THE WORLD

(15 June 2003 – 10 September 2003)

(Only accidents related to military munitions and military-grade energetic materials, from production to disposal, are reported in this section)

17 June 2003 Peru - Santiago de Chucho province - Transport - Bullet Impact

Six people, including two policemen, were killed when a truck loaded with 12.5 tonnes of dynamite blew up en route to a mine in northern Peru. A police official said the explosion created a crater 10-12m deep and 30-meter in diameter on a secondary road leading to the mine. The truck was attacked by a gang shooting to stop it but a projectile hit the load.

22 June 2003 - Iraq - Najaf - Storage - Initial cause unknown

Forty people were killed when looters accidentally started a fire in an ammunition depot. The looters were trying to steal large quantities of brass shell cases. As they were emptying the shells there was an explosion which set the whole depot on fire.

22 June 2003 - Djibouti - Camp Lemonier - Training – Bomb Drop

One U.S. Marine was killed and eight other U.S. service members were injured by an explosion that may have been caused by a bomb dropped from a B-52 Stratofortress that landed near forces at Godoria Range, along the northern coast of Djibouti.

Two service members received minor injuries and the other six injured service members were transported to the hospital in Djibouti for treatment. Two CH-53E Super Stallion helicopters supporting the exercise and parked near the range were damaged in the accident.

28 June 2003 - Iraq - Haditha - Storage - Cause unknown

25 to 30 people were killed and 6 injured in an explosion at an ammunition dump. The ammunition dump blew up when looters were trying to steal large quantities of brass shell cases.

30 June 2003 - Pakistan - Sonmyani area of Balochistan - Training - Cause unknown

Three persons were killed and two were injured when a mortar exploded accidentally at the Army Firing Range Mureeda Camp, fifty kilometres off Karachi. The blast occurred while defusing the mortar, according to police.

12 July 2003 - Russia - 70 kilometres north of Vladivostok - Storage - Fire

Several violent explosions occurred at the naval arsenal near Vladivostok, injuring 13 people. Most of the injuries were sustained when the explosion shattered windows and damaged walls of nearby houses. Sailors said the explosion was sparked off during Fisherman's Day celebrations when a firecracker apparently flew into the arsenal through a ventilation hole. More than 1,000 people from nearby villages were evacuated.

14 July 2003 - USA - Smyrna, GA - Test Firing - Unknown cause

Three employees were seriously burned in an explosion at a gun manufacturer. The blast, inside the test-firing range resulted in "very serious" life-threatening injuries to one employee while the two other employees sustained "serious but not life-threatening" injuries. According to the police: "It doesn't appear that the explosion was from a weapon. At this time, it appears the explosion was residue from spent ammunition."

16 July 2003 - Angola - Menongue, Kuando Kubango province - Storage - Fire

An explosion occurred after a fire that started near the National Air Force (FAN) hangar in the airport and reached the area where bombs were stored. The explosion killed two, injured 15 and destroyed the FAN hangar and vehicles. A second explosion occurred when mines around the area were triggered off 4 hours after the main explosion.

17 July 2003 - Austria - Salzburg - EOD Accident

Two Austrian bomb disposal experts were killed and a third person severely injured when a WW II bomb exploded by Salzburg railway station as they were trying to defuse it. The 250kg bomb exploded as the EOD team was attempting to remove its chemical detonator, blasting a crater six metres deep and causing serious damage to surrounding vehicles and buildings. About 50 bombs from the first and second world wars are defused each year in Austria.



24 July 2003 - Russia - Elban, Khabarovsk Krai - Transport - Near Miss?

Residents of the village of Elban discovered five derailed railcars loaded with explosives. The railcars, which reportedly broke loose from the Voskhod munitions plant while unattended, contained 26 tonnes of antitank mines and 160 tonnes of explosives. Police evacuated nearby residents and put the explosives under guard.

07 August 2003 - USA - San Jose, CA - Production - Cause unknown

An explosion occurred in a 300kg vessel where ammonium chloride was being mixed with other chemicals to make solid propellant for rockets and destroyed a three-story building. The subsequent fire burned for two and a half hours and consumed 20 acres of grassland. Five technicians were in a bunker 450m away at the time of the blast. One suffered hearing loss. No one was inside the building when it exploded.

14 August 2003 - Russia - Babstovo, Primorskii Krai - Transit - Fire

Two officers were killed and three other servicemen injured when a military truck loaded with some 600 artillery shells exploded at a military base. According to preliminary reports, the fire started due to the negligence of soldiers who had spilled fuel while they were refilling one of the base's vehicles. The fire quickly spread to open ground adjacent to the hangar, where four Ural trucks loaded with shells were parked. As soon as the fire reached the trucks, the 120-mm shells exploded, with fragments damaging neighbouring buildings. The blaze then spread to the supply depot, triggering off further explosions. Two officers tried to drive the trucks away from the hangar, but were killed by the blasts. Fragments of the shells were scattered over a radius of 500 metres. It took rescue teams five hours to bring the fire under control, and a further three hours before it was fully extinguished.

17 August 2003 - Iraq - Tikrit - Storage - Initial cause unknown

12 Iraqi people were killed in an explosion at an ammunition dump. The ammunition dump blew up when looters were trying to steal large quantities of brass shell cases.

THE TRANSITION FROM NIMIC TO MSIAC

AC/326 and Pilot MSIAC

AC/326 is the new NATO group resulting from the merger of the former AC/258 and AC/310. It held its first meeting on 6-7 May at NATO Headquarters. It is open to both the NATO and the Partnership for Peace Nations.

AC/326 has 6 Sub-Groups, which NIMIC offers to support through its Pilot MSIAC Operation.

These 6 Sub-Groups will be holding their first meetings in the September-November 2003 timeframe. At these meetings they will be defining their 2004 Programmes of Work, and requesting Pilot MSIAC support as needed. In 2004, we expect to support them in the organization of technical meetings, to open a section of the NIMIC secure website for their use, and to contribute to the production of some of their Ammunition Safety standards and related documents.



STAFF VACANCY

The deadline for applications for the grade A.4 post of Technical Officer (Propulsion Systems) at NIMIC which is vacant has been extended to 17 October 2003.

The post vacancy has been published by NATO and is available on the NIMIC website.

Applicants must belong to one of the NIMIC member nations as well as a NATO member nation. Applications should be sent directly to the Recruitment Office (AA 102) NATO Headquarters, 1110 Brussels, Belgium.

NIMIC NEWS

NIMIC TSO ROTATION

Michael Fisher was hired from NAWC China Lake (US) in March 1999, as our TSO-Propulsion Design. He was replacing Benjamin (Bo) Stokes, who died in a car accident in December 1997.

Michael left NIMIC on 22 September 2003, after spending four and a half years in Brussels. He took up a position that had become vacant at the Chemical Propulsion Information Agency, US. His new job will encompass Insensitive Munitions issues, and Information Analysis will still be his core task, like at NIMIC. No doubt he will succeed in his new assignment, and will remain a very active Point of Contact for NIMIC in the future.

As expert in Propulsion, Michael answered technical questions, and wrote and presented a number of high level reports in this area. He had also taken leadership for IM Test & Evaluation issues at NIMIC, organizing the 2002 Workshop on Insensitive Munitions Assessment Methodology.

We wish farewell to Michael, his wife Jamie and children Andrea and Zachary, and are looking forward to interacting with them in the future.

FAREWELL TO OUR FINNISH "BO STOKES FELLOW"

Kosti Nevala's one-year fellowship at NIMIC ended on 31 August 2003. He has now returned to Finland and resumed work for the Finnish MOD.

Kosti was very effective, both in terms of technical work and development of the relations between Finland and NIMIC. He produced a report on ageing and two reports on less sensitive melt-cast explosives. He was one of the volunteer testers of the new CBAM software, Version 1.01 Beta. He gathered information from Finland (accidents data, Finnish Points of Contact), wrote a page in Finnish for the NIMIC website, and stimulated interaction with Finland (questions and visits from Finnish customers).

He also managed the organization of two 2-day lecture series given by the NIMIC Staff to two Finnish Integrated Project Teams (155 mm Artillery Shell and 120 mm Mortar Round). This is a new service that NIMIC can now offer to its Member Nations.

For a year, the NIMIC staff also enjoyed Kosti's humour, which he was able to keep under all circumstances, including weather conditions that were pretty unusual to him. We know he is looking forward to a real Finnish winter this year, and wish him the best for his future career.

We very much hope that a new Stokes Fellow will join in 2004. Once again, this programme is of the highest interest for both the Fellow's nation and NIMIC. Candidates should contact their National Focal Point Officer and the NIMIC Project Manager (See "Contacting NIMIC").

FAREWELL TO OUR ENSIETA STUDENT

The NIMIC staff bade a fond farewell to Olympe Daïaa who completed her four week stay at the end of August. Olympe is studying at ENSIETA (French National Academy for Defence Engineering) and such work experience is an essential part of her training. During her time here she assisted with the update of EM³, EMC and NEWGATES, making a valuable contribution to each. She also wrote a personal account of NIMIC and its inner working, which was very complementary. We all wish her every success in the future.