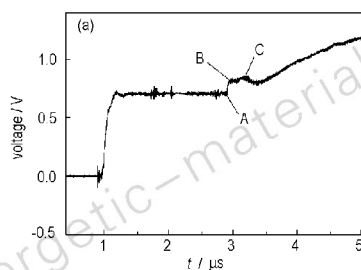


Analysis on the Waveforms of Detonator Output Measured with Manganin Piezoresistance Method

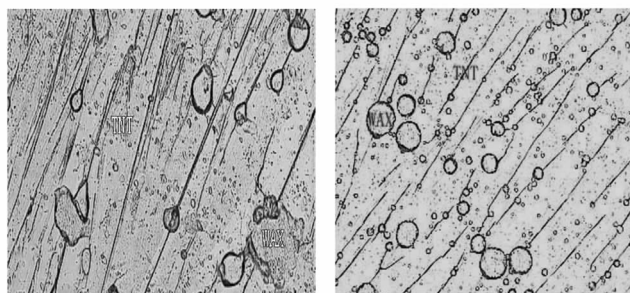
YAN Nan, HAN Xiu-feng, CAI Rui-jiao
Hanneng Cailiao, 2004, 12(5) : 257



The record waveform of detonator without bottom case is different to that of detonator with bottom case. The risetime of pressure waveform is shorter. And there is about 300 nanoseconds' duration on the waveform.

Research on Dispersion and Emulsification of Wax Caused by Emulsifier in Composition B

WANG Li-qiong, ZENG Qing-guo,
WANG Xiao-ning, HUANG Hui,
HUANG Yong, HU Run-Zhi
Hanneng Cailiao, 2004, 12(5) : 264

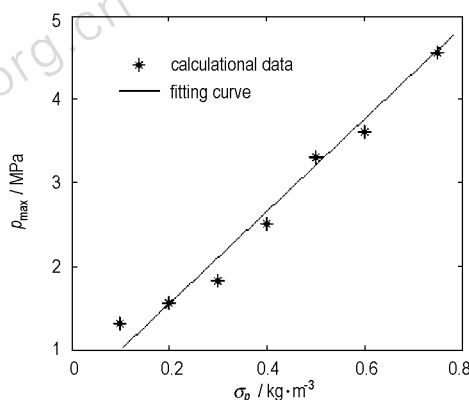


microstructure with single emulsifier microstructure with emulsifier complex

Effect of different emulsifiers on dispersion of wax in composition B is primarily studied by means of emulsifying stability test and observation of microscope photographs. The complex composed of lecithin and NC is much better than those single emulsifiers.

Detonation Structure of RDX Dust in Suspension

ZHENG Miao, HONG Tao
Hanneng Cailiao, 2004, 12(5) : 269



RDX dust detonation in suspension behind shock waves was analyzed with two-phase flow model. Pressure of detonation and development of temperature were numerically simulated while concentration of particle was changed.

Study on the Millimeter Wave Attenuation Performance of Expanded Graphite in Three-dimensional Space

GUAN Hua, PAN Gong-pei, WANG Guang,
ZHOU Zun-ning
Hanneng Cailiao, 2004, 12(5) : 273

The expanded mechanism of expansible graphite was analyzed, and attenuation performance of expanded graphite in three-dimensional space at 3 mm and 8 mm wave was studied experimentally.

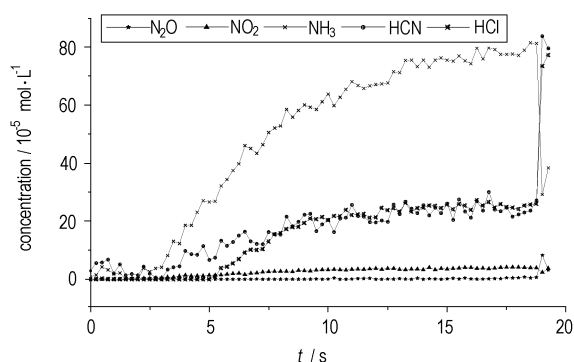
Application of Dendrimer Bonding Agent in PET Test Pieces

PAN Bi-feng, LUO Yun-jun, TAN Hui-min
Hanneng Cailiao, 2004, 12(5) : 277

In order to investigate the interfacial properties between solid fillers and binder by adding dendrimer bonding agent (DBA) in propellant system, a series of solid propellant test pieces were prepared in this paper. The propellant system was composed of IPDI, PET, TMP, T-12, solid filler (20% of HMX, RDX and AP), and 0.4% DBA. The mechanical properties of above test pieces were detected.

Study on Rapid Thermolysis of $[\text{Cd}(\text{CHZ})_3](\text{ClO}_4)_2$

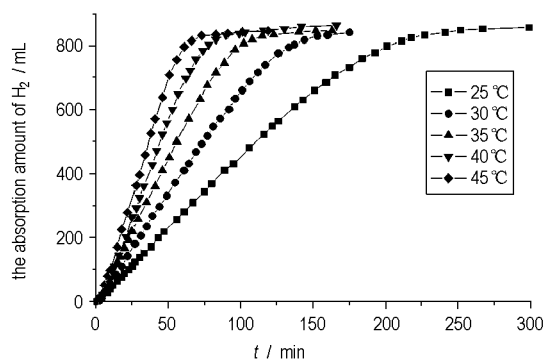
SUN Yuan-hua, ZHANG Tong-lai, MA Gui-xia,
ZHANG Jian-guo, WU Tao
Hanneng Cailiao, 2004, 12(5) : 282



Using rapid scanning Fourier transform infrared FI-IR spectroscopy, 11 IR-active gas products were resolved during the flash pyrolysis process.

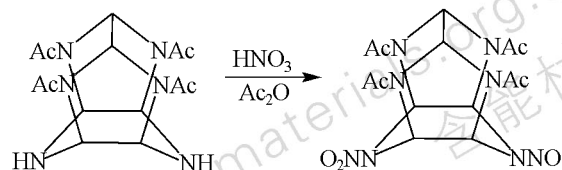
Kinetics of Hydrogenolysis Debonylation of 2,6,8,12-Tetraacetyl-4,10-dibenzyl-2,4,6,8,10,12-hexaazaisowurtzitane

SUN Cheng-hui, CAO Ke-guang, FANG Tao,
MA Ai-ling, ZHAO Xin-qi
Hanneng Cailiao, 2004, 12(5) : 287



The absorption amount of hydrogen was used to stand for the reaction extent. Kinetic calculations of the experimental data at different temperatures were carried out, according to the integral reaction rate equation.

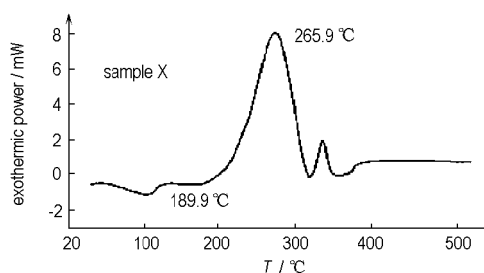
Synthesis and Characterization of Tetraacetyldinitrohexaazaisowurtzitane



A novel method for preparing tetraacetyldinitrohexaazaisowurtzitane (TADN) by nitration of tetraacetylhexaazaisowurtzitane (TAIW) with the nitrating agent of 98% nitric acid and acetic anhydride was studied, and the structure of the resulting compound was identified.

FANG Tao, SUN Cheng-hui, ZHAO Xin-qi
Hanneng Cailiao, 2004, 12(5) : 291

Thermal Decomposition of Emulsion Explosives



The initial exothermic temperature of the decomposition of emulsion explosives is between 189.9 °C ~ 250.0 °C, and the maximum peak is between 265.9 °C ~ 308.0 °C. KCl and NaCl can increase the thermal stability of mentioned emulsion explosives.

MA Zhi-gang, WANG Jin
Hanneng Cailiao, 2004, 12(5) : 294

Bayesian Reliability Estimation of a Cartridge of Ejector with Zero-failure Data

ZHANG Tian-fei, CAI Rui-jiao, DONG Hai-ping,
WEN Yu-quan
Hanneng Cailiao, 2004, 12(5) : 297

Based on whole cartridge of ejector test data and its unit test data, the reliability of a cartridge of ejector is estimated by hierarchical Bayes reliability estimation method in this paper.

The Effect of Pressure and Times of Impinging on the Particle Size of Superfine HMX by Impinging Method

HE De-chang, CHEN Qian, TAN Zheng
Hanneng Cailiao, 2004, 12(5) : 300

The effect of impingement times and pressures on the crushing of HMX was studied.

Absorbing of Butanone-toluene and Determination by Gas Chromatography

ZHU Ming, ZHAO Jun-ke
Hanneng Cailiao, 2004, 12(5) : 302

The conditions of absorbent selected are put forward, and using *n*-hexanol as absorbent, a sort of absorbent absorbing toluene-butanone mixing matter is realized.

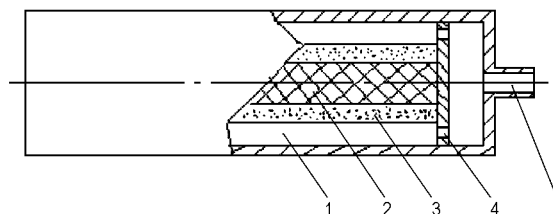
Review on the Properties and Applications of 1,3,3-Trinitroazetidine

LI Ji-zhen, FAN Xue-zhong, WANG Bo-zhou
Hanneng Cailiao, 2004, 12(5) : 305

The properties of 1,3,3-trinitroazetidine (TNAZ) were reviewed, the latest progresses on military and civil applications were introduced.

Progress in Cooling Technology for Pyrotechnic Gas Generator

LI Chang, DU Zhi-ming
Hanneng Cailiao, 2004, 12(5) : 309



1—gas rout, 2—gas generating agent,
 3—coolant, 4—baffle with holes, 5—vent

The choice of coolant for pyrotechnic gas generator, cooling methods, the configuration design of cooling cells and numerical simulation of cooling course at home and abroad were reviewed.

The Research on Surface Coating of Boron Particles

ZHANG Qiong-fang, ZHANG Jiao-qiang
Hanneng Cailiao, 2004, 12(5) : 314

Through surface coating of boron particles with GAP, TDI, AP, AP/KP etc., the surface characteristics of boron particles were improved and the combustion efficiency of boron-based propellant was increased.

The Influence of Aluminum Power on Explosive Performance

YIN Hai-quan, PAN Qing, ZHANG Jian-liang,
 WANG Guo-zhu, YANG Qian-sheng
Hanneng Cailiao, 2004, 12(5) : 318

Some main characteristics and application of aluminized explosives were discussed.