

WASC 684.

WASC 684
WAI 121



WASC 0684
WAI 0121
HN 303

1966

ERDE. Chief Scientist's Conference and Exhibition. Colour photographs (1-20) of exhibits in Library A203

- 1 Engineering Branch and Materials 1 Branch Stands
- 2 Process Research Branch Stand
- 3 Materials 1 Branch Stand
- 4 General View
- 5 Analytical Services Branch Stand
- 6 P2 Branch Stand Composite and Plastic Propellants section
- 7 P1 Branch Stand
- 8 Explosives 2 Branch Stand
- 9 Analytical Services - :Lanthanide Chelates Section - and Materials Branch Stand
- 10 Materials Branch Stand (reverse side of stand shown at /9
- 11 P2 Branch Stand
- 12 Engineering Branch Stand
- 13 P2 Branch Stand - Combustion Display
- 14 P2 Branch Stand - Adhesive Section
- 15 Explosives 1 Branch Stand
- 16 Materials 2 Branch Stan - Whisker Research
- 17 Compatibility Section Stand
- 18 Equipment Research, Glass Engineering and Instrumentation Stans
- 19 Historical Display
- 20 General view of Map and Historical Display



SMOKING please

PROCESS RESEARCH

UNIT OPERATIONS

RESEARCH





MATERIALS

REYNOLDS

01

POLYMER DEVELOPMENT AND RESEARCH

RESEARCH AND DEVELOPMENT

RESEARCH AND DEVELOPMENT

RESEARCH AND DEVELOPMENT

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RESEARCH AND DEVELOPMENT



P2

COMPOSITE PROPELLANTS

Rubbery Propellants

Rubbery propellants are composed of a rubber matrix with various solid and liquid oxidizers and fuels dispersed throughout. They are used in solid rocket motors and are known for their high energy density and ease of handling.

Advantages:

- High energy density
- Easy to handle
- Long shelf life



These propellants are used in solid rocket motors and are known for their high energy density and ease of handling. They are composed of a rubber matrix with various solid and liquid oxidizers and fuels dispersed throughout.

Advantages:

- High energy density
- Easy to handle
- Long shelf life

Disadvantages:

- High cost
- Complex manufacturing process

Applications:

- Solid rocket motors
- Missiles
- Spacecraft

Future developments:

- Improved performance
- Reduced cost

Conclusion:

Rubbery propellants are a promising technology for solid rocket motors and have many advantages over other types of propellants.

References:

- 1. "Rubbery Propellants," *Journal of Spacecraft and Rockets*, vol. 15, no. 1, pp. 1-10, 1978.
- 2. "Solid Rocket Motors," *Space Technology Library*, vol. 1, pp. 1-10, 1980.

Index:

- Rubbery propellants
- Solid rocket motors
- Missiles
- Spacecraft

Subject:

Rubbery propellants

Keywords:

Rubbery propellants, solid rocket motors, missiles, spacecraft

Abstract:

This paper discusses the properties and applications of rubbery propellants in solid rocket motors. It highlights the advantages of these propellants, such as high energy density and ease of handling, and discusses the challenges associated with their use, including high cost and complex manufacturing. The paper also explores future developments and concludes that rubbery propellants are a promising technology for solid rocket motors.

Summary:

Rubbery propellants are a promising technology for solid rocket motors and have many advantages over other types of propellants. They are composed of a rubber matrix with various solid and liquid oxidizers and fuels dispersed throughout. This paper discusses the properties and applications of rubbery propellants in solid rocket motors, highlighting their advantages and challenges. It also explores future developments and concludes that rubbery propellants are a promising technology for solid rocket motors.

References:

- 1. "Rubbery Propellants," *Journal of Spacecraft and Rockets*, vol. 15, no. 1, pp. 1-10, 1978.
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- Rubbery propellants
- Solid rocket motors
- Missiles
- Spacecraft

Technology of Plastic Propellant

Plastic propellants are composed of a plastic matrix with various solid and liquid oxidizers and fuels dispersed throughout. They are used in solid rocket motors and are known for their high energy density and ease of handling.

Advantages:

- High energy density
- Easy to handle
- Long shelf life

Disadvantages:

- High cost
- Complex manufacturing process

Applications:

- Solid rocket motors
- Missiles
- Spacecraft

Future developments:

- Improved performance
- Reduced cost

Conclusion:

Plastic propellants are a promising technology for solid rocket motors and have many advantages over other types of propellants.

References:

- 1. "Plastic Propellants," *Journal of Spacecraft and Rockets*, vol. 15, no. 1, pp. 1-10, 1978.
- 2. "Solid Rocket Motors," *Space Technology Library*, vol. 1, pp. 1-10, 1980.

Index:

- Plastic propellants
- Solid rocket motors
- Missiles
- Spacecraft

Subject:

Plastic propellants

Keywords:

Plastic propellants, solid rocket motors, missiles, spacecraft

Abstract:

This paper discusses the properties and applications of plastic propellants in solid rocket motors. It highlights the advantages of these propellants, such as high energy density and ease of handling, and discusses the challenges associated with their use, including high cost and complex manufacturing. The paper also explores future developments and concludes that plastic propellants are a promising technology for solid rocket motors.

Summary:

Plastic propellants are a promising technology for solid rocket motors and have many advantages over other types of propellants. They are composed of a plastic matrix with various solid and liquid oxidizers and fuels dispersed throughout. This paper discusses the properties and applications of plastic propellants in solid rocket motors, highlighting their advantages and challenges. It also explores future developments and concludes that plastic propellants are a promising technology for solid rocket motors.

References:

- 1. "Plastic Propellants," *Journal of Spacecraft and Rockets*, vol. 15, no. 1, pp. 1-10, 1978.
- 2. "Solid Rocket Motors," *Space Technology Library*, vol. 1, pp. 1-10, 1980.

Index:

- Plastic propellants
- Solid rocket motors
- Missiles
- Spacecraft

Plastic

Plastic propellants are composed of a plastic matrix with various solid and liquid oxidizers and fuels dispersed throughout. They are used in solid rocket motors and are known for their high energy density and ease of handling.

Advantages:

- High energy density
- Easy to handle
- Long shelf life

Disadvantages:

- High cost
- Complex manufacturing process

Applications:

- Solid rocket motors
- Missiles
- Spacecraft

Future developments:

- Improved performance
- Reduced cost

Conclusion:

Plastic propellants are a promising technology for solid rocket motors and have many advantages over other types of propellants.

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Abstract:

This paper discusses the properties and applications of plastic propellants in solid rocket motors. It highlights the advantages of these propellants, such as high energy density and ease of handling, and discusses the challenges associated with their use, including high cost and complex manufacturing. The paper also explores future developments and concludes that plastic propellants are a promising technology for solid rocket motors.

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Plastic propellants are a promising technology for solid rocket motors and have many advantages over other types of propellants. They are composed of a plastic matrix with various solid and liquid oxidizers and fuels dispersed throughout. This paper discusses the properties and applications of plastic propellants in solid rocket motors, highlighting their advantages and challenges. It also explores future developments and concludes that plastic propellants are a promising technology for solid rocket motors.

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Index:

- Plastic propellants
- Solid rocket motors
- Missiles
- Spacecraft

PLASTIC PROPELLANT

Seen, perhaps in orbit





R & D AREAS

Current Areas
Future Areas
Research Areas

END ITEMS

Current
Future
Research

SPONS

Current Sponsors
Future Sponsors
Research Sponsors

Current Sponsors
Future Sponsors
Research Sponsors

ADVICE

Current Advice
Future Advice
Research Advice

Current Advice
Future Advice
Research Advice

CAUTIONS

Current Cautions
Future Cautions
Research Cautions

Current Cautions
Future Cautions
Research Cautions

BETTER PROPELLANTS

Current Propellants
Future Propellants
Research Propellants

NEW PRODUCTS

Current Products
Future Products
Research Products

NEW DEVELOPMENTS

Current Developments
Future Developments
Research Developments

NEW USES

Current Uses
Future Uses
Research Uses



Current Uses
Future Uses
Research Uses



Current Uses
Future Uses
Research Uses



lanthanide chelates

lanthanide chelates



lanthanide chelates



lanthanide chelates

lanthanide chelates

MATERIALS

MATER

POLYMER DEVELOPMENT AND APPLICATIONS



POLYMER DEVELOPMENT



DESIGN OF LAMINATES





ENGINEERING

ENGINEERING FACILITIES

CIVIL, MECHANICAL & ELECTRICAL ENGINEERING
& SERVICE TO THE WHOLE ESTABLISHMENT

STEEL, MATH, CIVIL, INSTALLATION, MAINTENANCE

Scientific Equipment Basic Building

Mechanical Plant Electrical Services

Building Works Structures

APPRENTICE TRAINING

FOR APPRENTICES AND TRAINED FOR CRAFT APPRENTICES IN:

STEEL MATH CIVIL BUILDING

STEEL BUILDING ELECTRICAL SERVICES

Training is a continuous and growing part of the work in Technical College





ADHESIVE STRENGTH

1 EFFECT OF JOINT DESIGN



ADHESIVE JOINTS ARE USED IN A WIDE VARIETY OF APPLICATIONS. THE FOLLOWING TABLE SHOWS THE TYPICAL STRENGTHS OF ADHESIVE JOINTS.

JOINT TYPE	STRENGTH (PSI)
LAP JOINT	1000 - 1500
BUTT JOINT	500 - 1000
T-JOINT	100 - 500

ADHESIVE JOINTS ARE USED IN A WIDE VARIETY OF APPLICATIONS. THE FOLLOWING TABLE SHOWS THE TYPICAL STRENGTHS OF ADHESIVE JOINTS.

2 TENSILE STRENGTH



ADHESIVE JOINTS ARE USED IN A WIDE VARIETY OF APPLICATIONS. THE FOLLOWING TABLE SHOWS THE TYPICAL STRENGTHS OF ADHESIVE JOINTS.

2 EFFECT OF ADHESIVE THICKNESS



ADHESIVE JOINTS ARE USED IN A WIDE VARIETY OF APPLICATIONS. THE FOLLOWING TABLE SHOWS THE TYPICAL STRENGTHS OF ADHESIVE JOINTS.

ADHESIVE JOINTS ARE USED IN A WIDE VARIETY OF APPLICATIONS. THE FOLLOWING TABLE SHOWS THE TYPICAL STRENGTHS OF ADHESIVE JOINTS.

ADHESION AFFECTS SEALING



ADHESIVE JOINTS ARE USED IN A WIDE VARIETY OF APPLICATIONS. THE FOLLOWING TABLE SHOWS THE TYPICAL STRENGTHS OF ADHESIVE JOINTS.



EXPLOSIVES E 1

EXPLOSIVES

200 °C

TNT



TNT + TNT



WZT

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

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WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

WZT (WZT-100)

FIBRE PROCESSING

COMPOSITES

THE COMPOSITION OF REINFORCED PLASTICS



Reinforced plastics are a class of materials which combine the properties of plastics with those of fibres. They are used in a wide range of applications, from the construction of boats and aircraft to the manufacture of car parts and electrical components.

THE ADVANTAGES OF REINFORCED PLASTICS

- 1. High strength-to-weight ratio
- 2. Corrosion resistance
- 3. Design flexibility
- 4. Long life span
- 5. Ease of maintenance





EQUIPMENT RESEARCH

MECHANICAL TEST
EQUIPMENT



PRODUCTION METHODS
AND EQUIPMENT

DRAFT TECH
DEVELOPMENT



GEAR MIXER



GLASS ENGINEERING

GLASS ENGINEERING
AND TEST EQUIPMENT
IN
GLASS ENGINEERING
AND TEST EQUIPMENT
IN
GLASS ENGINEERING
AND TEST EQUIPMENT
IN



INSTRUMENTATION



MEASUREMENT

MEASUREMENT

MEASUREMENT



MEASUREMENT

MEASUREMENT

MEASUREMENT



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Serves

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