

WASC 1990

WAI 499

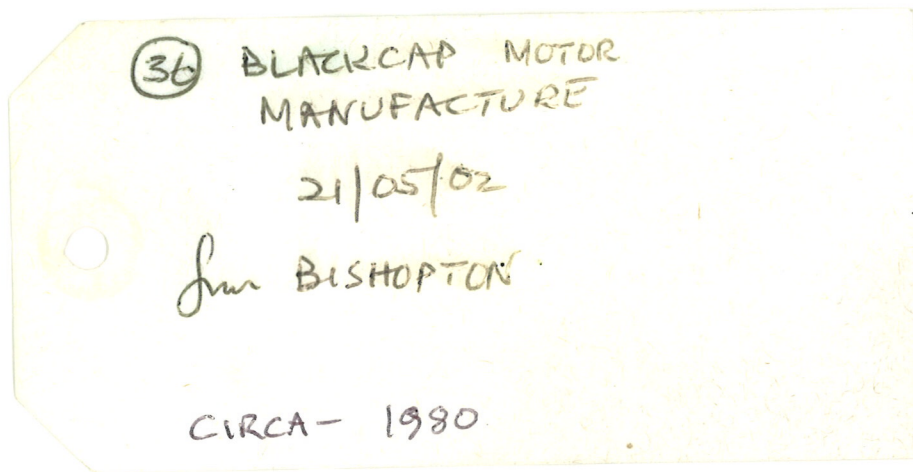
BLACKCAP ROCKET

MOTOR MANUFACTURE

— BISHOPTON

Blackcap Rocket Motor Manufacture. Process descriptions and photographs

- 1 Cotton Linters as delivered in bales
- 2 Cotton teased and prepared for nitration
- 3 New mechanical nitration buildings
- 4 New mechanical nitrators
- 5 Paper scrolling for wood (Old Facility 1944)
- 6 Thompson Displacement for dipping wood NC (Old Facility 1944)
- 7 Paper scrolling for Wood (Old Facility now)
- 8 Thompson Displacement for dipping wood NC (Old Facility now)
- 9 The Rolling Mill
- 10 Rolling Machine
- 11 Rolling Operation
- 12 22.5" VU Carpet Roll
- 13 22.5" Horizontal Press
- 14 Cutting to length extrusions from 22.5" Press
- 15 Quality inspection of X-Ray Charges
- 16 Sawing of Chares after X-Ray verification
- 17 Machining of Charges
- 18 Ethyl Cellulose coat expansion
- 19 Ethyl Cellulose coat preparation
- 20 Coated charge and empty motor body
- 21 Preparation for motor assembly
- 22 Thrust alignment of completed assembly
- 23 Blackcap and Redstart Charge Conduit Configuration
- 24 Redstart assembly
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- 26 Process Description: Nitrocellulose (Wood based, Displacement)
- 27 Process Description: Nitrocellulose
- 28 Process Description: Nitroglycerine and Paste
- 29 Process Description: Rocket Propellant



BLACKCAP ROCKET MOTOR MANUFACTURE



Bishopton

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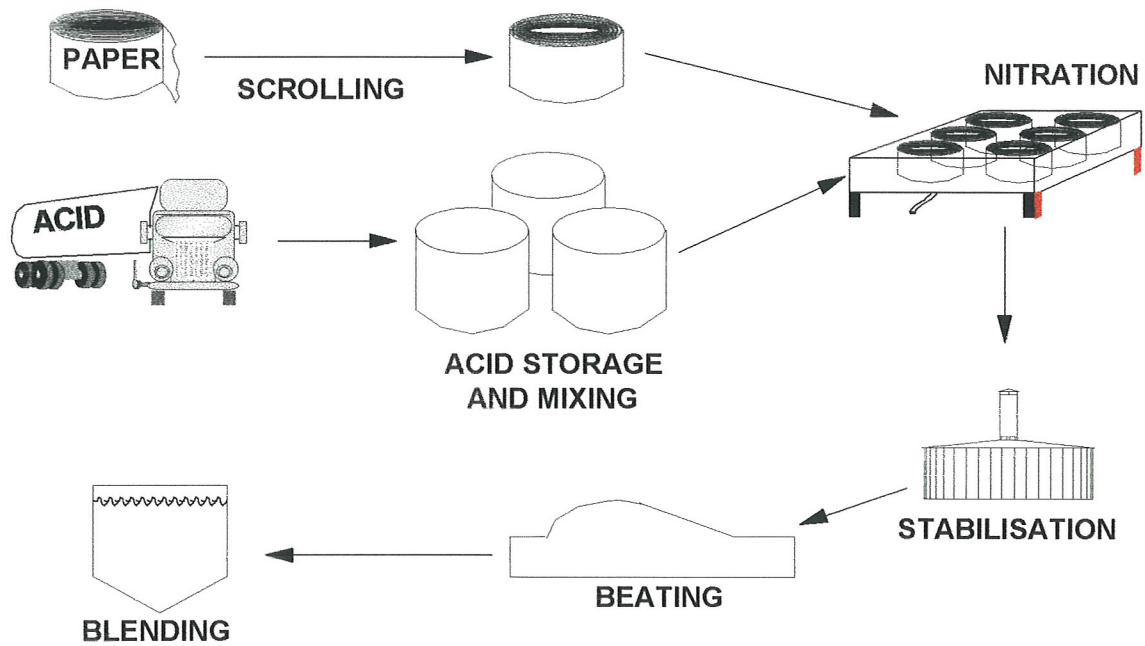
A. PROCESS DESCRIPTIONS

1. Nitrocellulose (Wood Based, Displacement)
2. Nitrocellulose
3. Nitroglycerine and Paste
4. Rocket Propellant

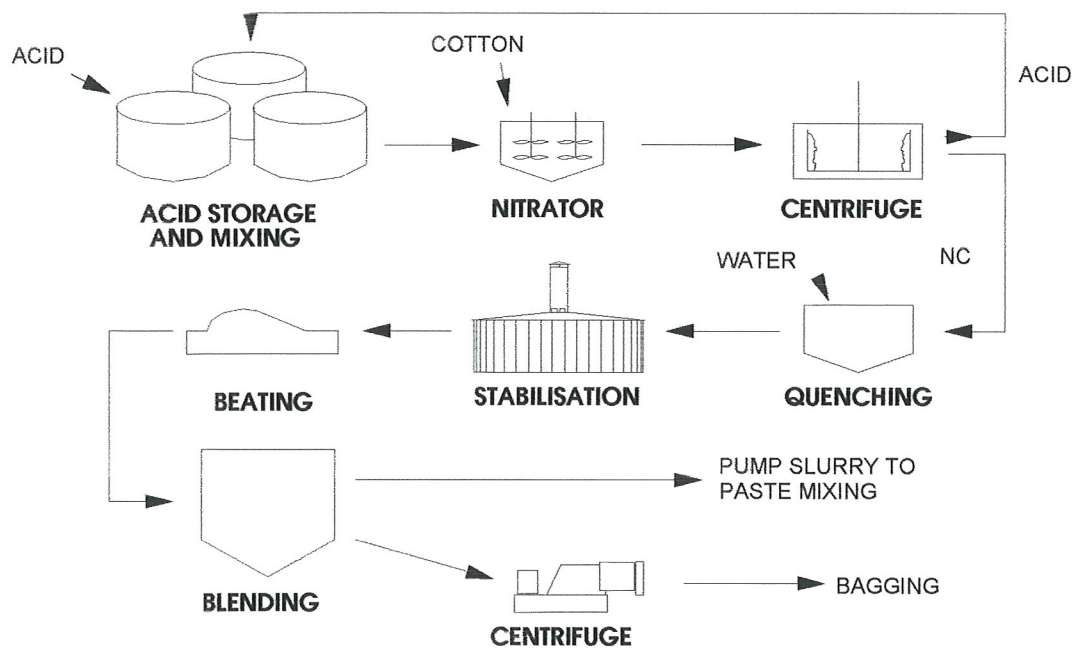
B. PHOTOGRAPHS

1. Cotton Linters as delivered in Bales
2. Cotton Teased and Prepared for Nitration
3. New Mechanical Nitration Building
4. New Mechanical Nitrators
5. Paper Scrolling for Wood NC (Old Facility 1944)
6. Thompson Displacement for Dipping Wood NC (Old Facility 1944)
7. Paper Scrolling for Wood NC (Old Facility now)
8. Thompson Displacement for Dipping Wood NC (Old Facility now)
9. The Rolling Mill
10. Rolling Machine
11. Rolling Operation
12. 22.5" VU Carpet Roll
13. 22.5" Horizontal Press
14. Cutting to Length Extrusions from 22.5" Press
15. Quality Inspection of X-ray Charges
16. Sawing of Charges after X-ray Verification
17. Machining of Charges
18. Ethyl Cellulose Coat Expansion
19. Ethyl Cellulose Coat Preparation
20. Coated Charge and Empty Motor Body
21. Preparation for Motor Assembly
22. Thrust Alignment of Completed Assembly
23. Blackcap and Redstart Charge Conduit Configuration
24. Redstart Assembly
25. Redstart Assembly

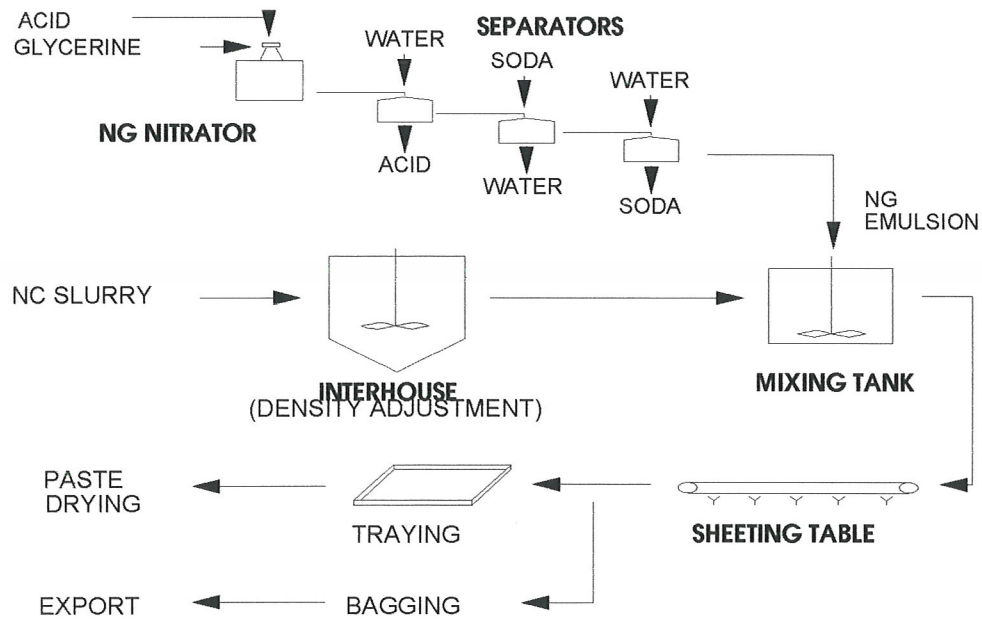
PROCESS DESCRIPTION - NITROCELLULOSE (WOOD BASED, DISPLACEMENT)



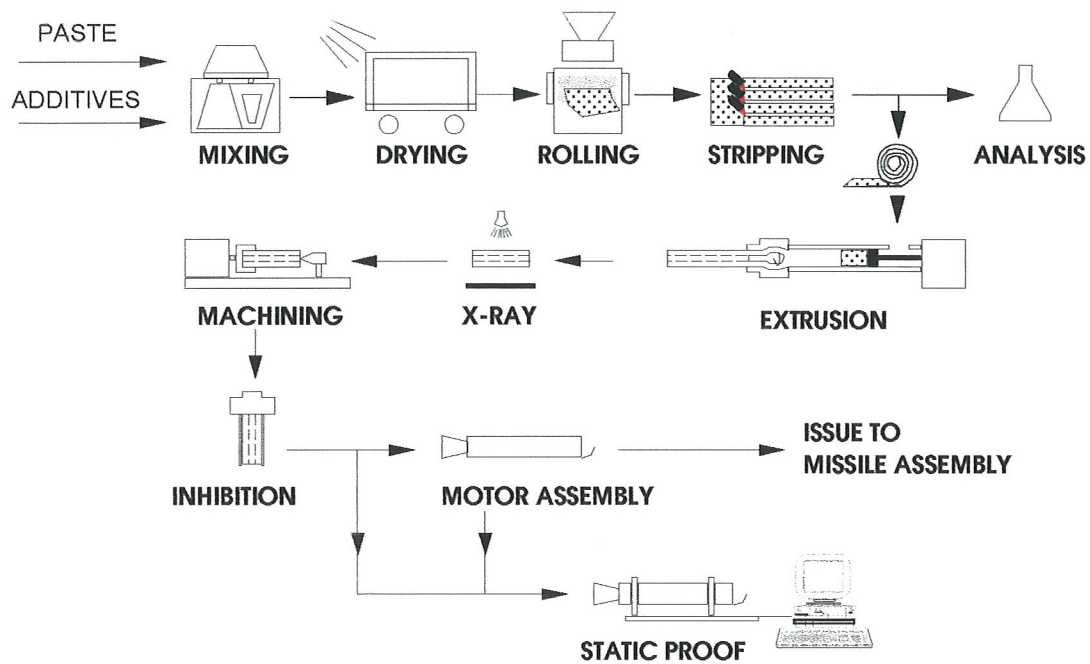
PROCESS DESCRIPTION - NITROCELLULOSE



PROCESS DESCRIPTION - NITROGLYCERINE & PASTE



PROCESS DESCRIPTION - ROCKET PROPELLANT





**1. COTTON LINTERS AS DELIVERED IN
BALES**



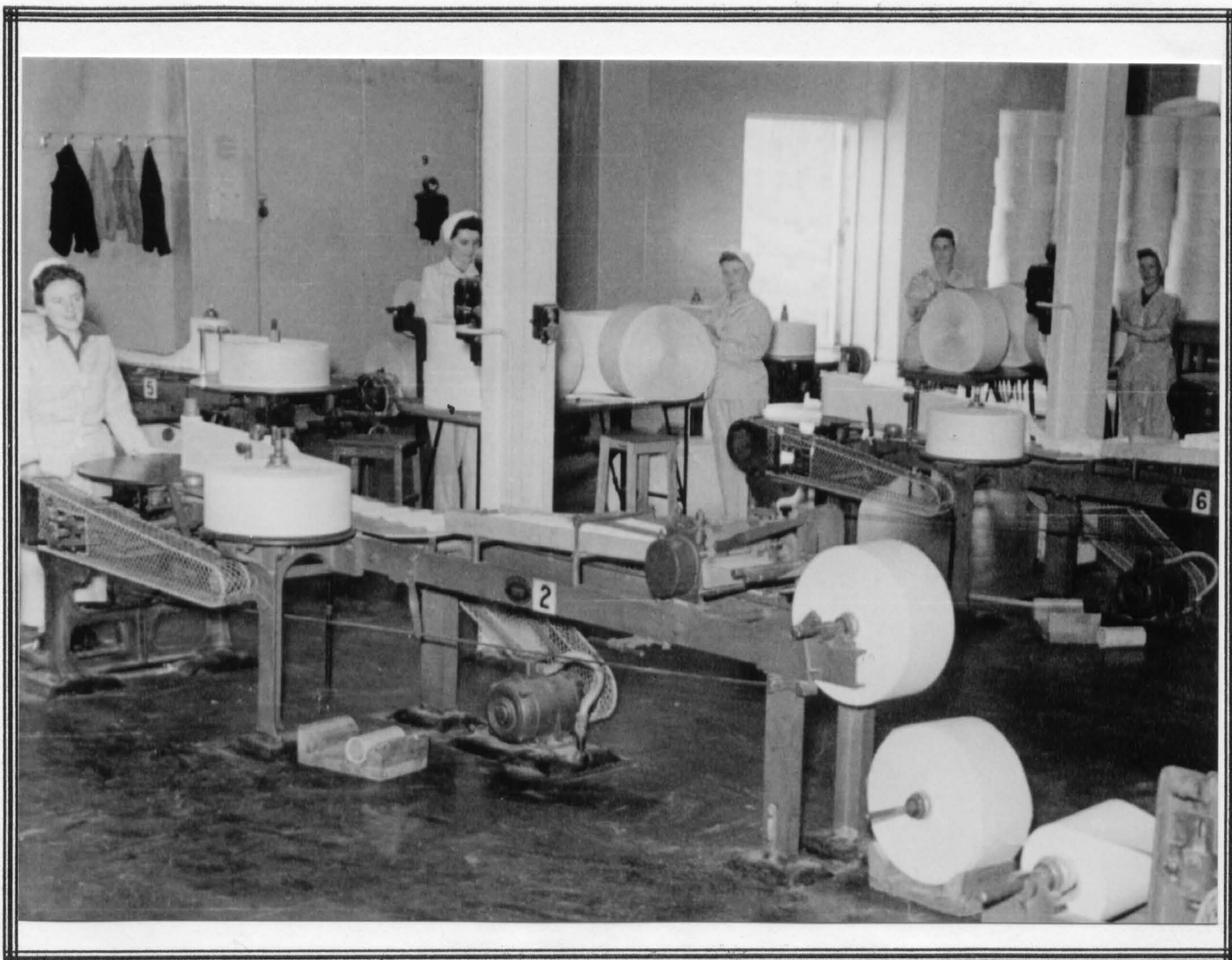
2. COTTON TEASED AND PREPARED FOR NITRATION



3. NEW MECHANICAL NITRATION BUILDING



4. NEW MECHANICAL NITRATORS



**5. PAPER SCROLLING FOR WOOD NC
(OLD FACILITY 1944)**



**6. THOMPSON DISPLACEMENT FOR
DIPPING WOOD NC
(OLD FACILITY 1944)**



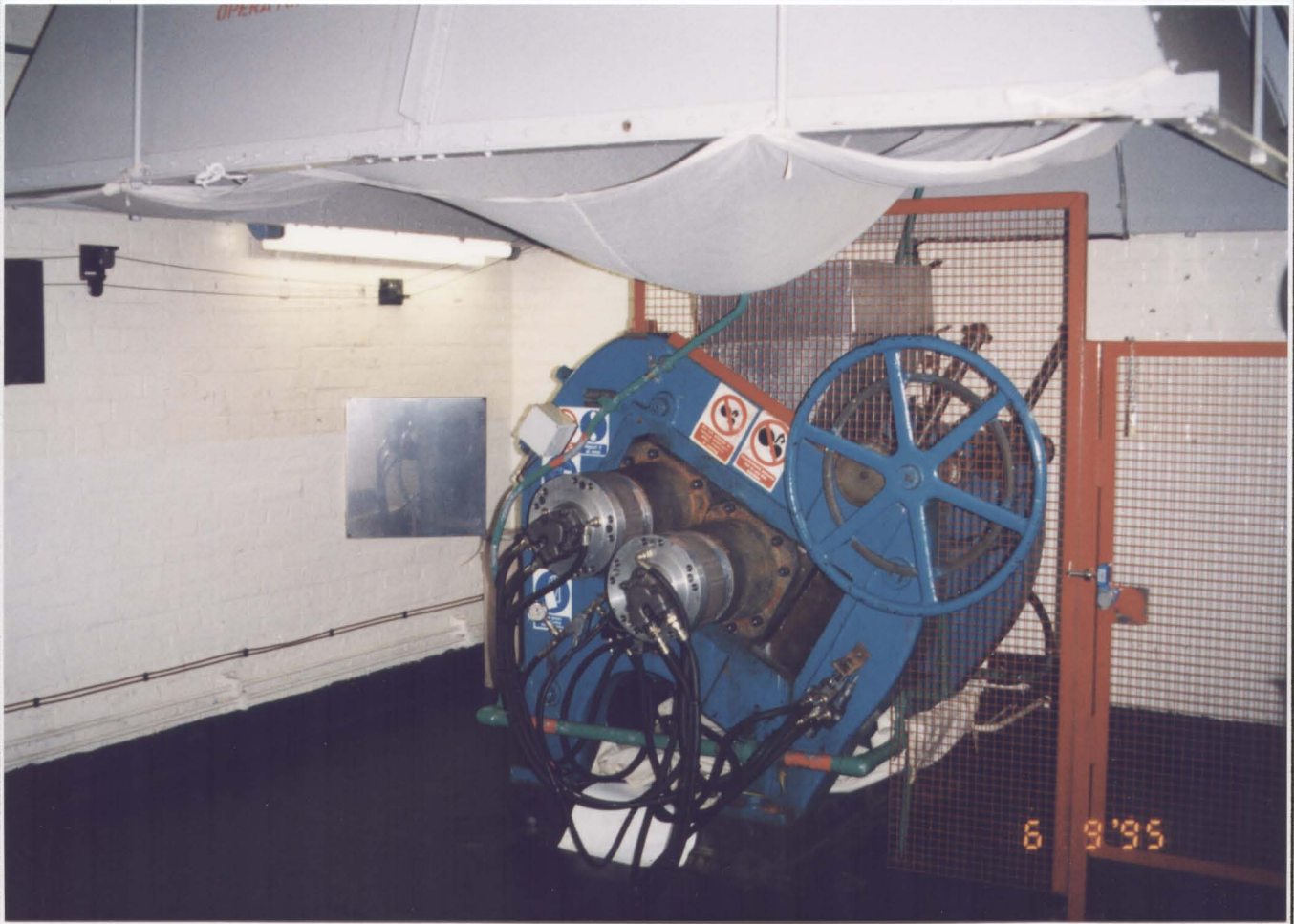
7. PAPER SCROLLING FOR WOOD NC (OLD FACILITY NOW)



**8. THOMPSON DISPLACEMENT FOR
DIPPING WOOD NC
(OLD FACILITY NOW)**



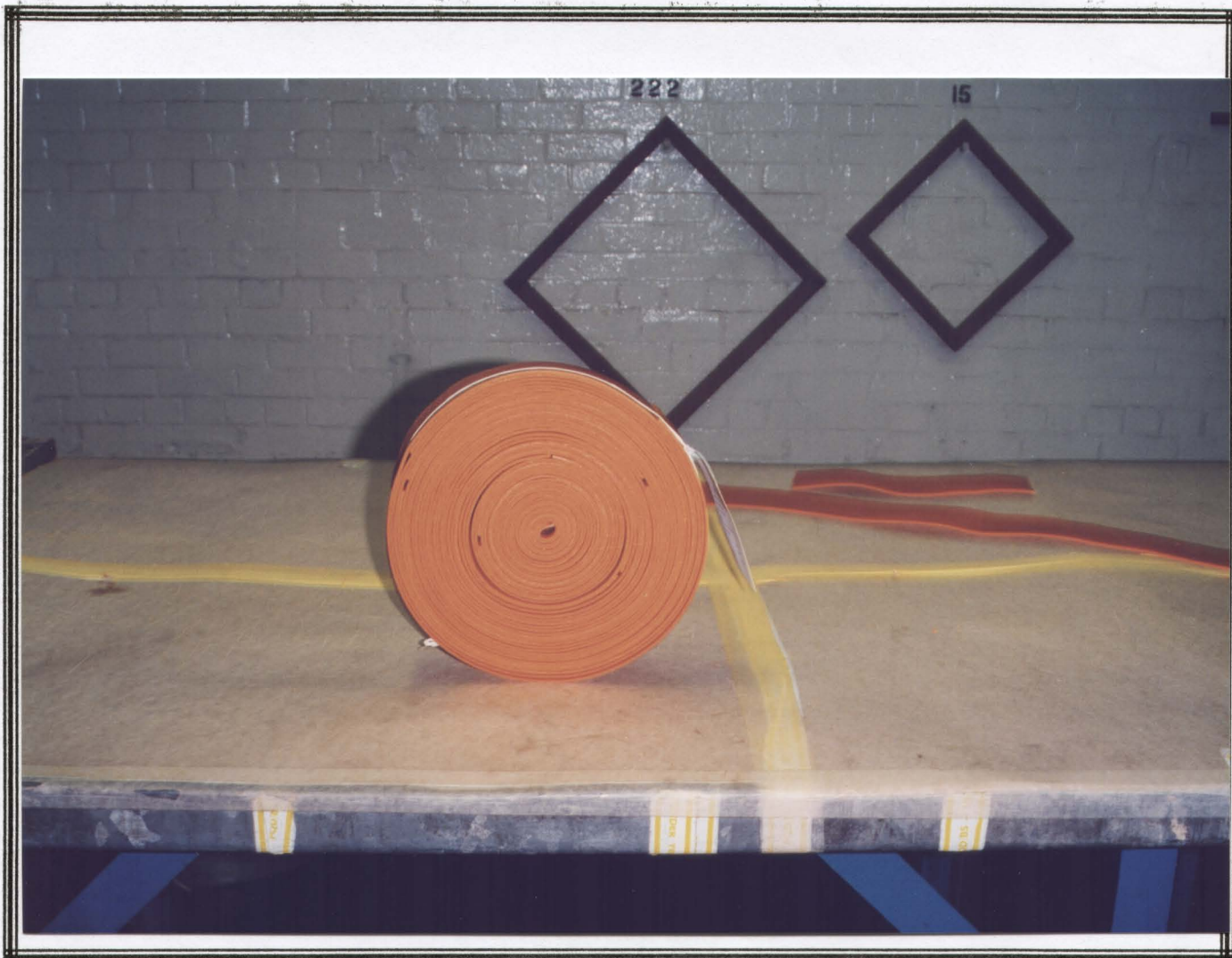
9. THE ROLLING MILL



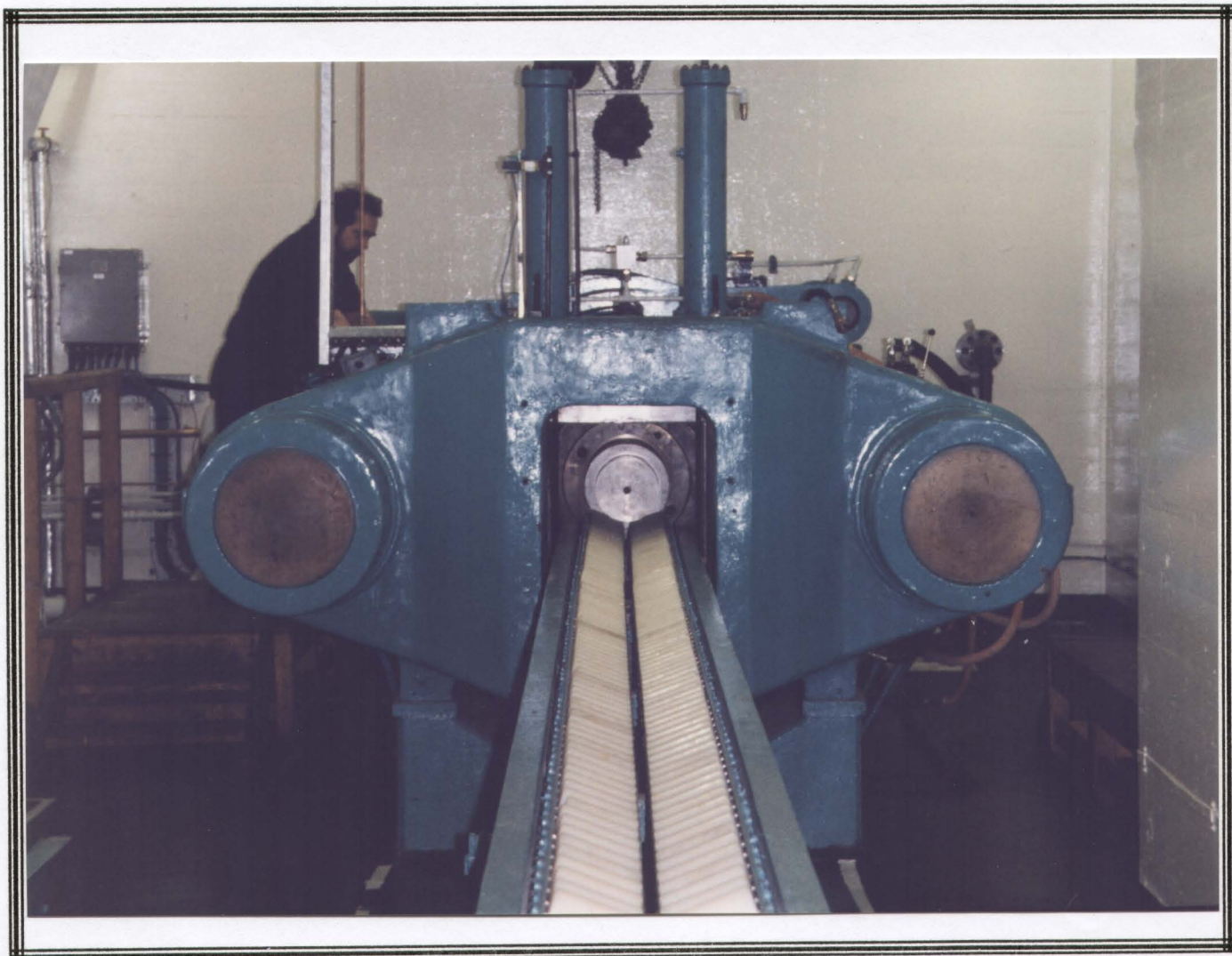
10. ROLLING MACHINE



11. ROLLING OPERATION



12. 22.5" VU CARPET ROLL



13. 22.5" HORIZONTAL PRESS



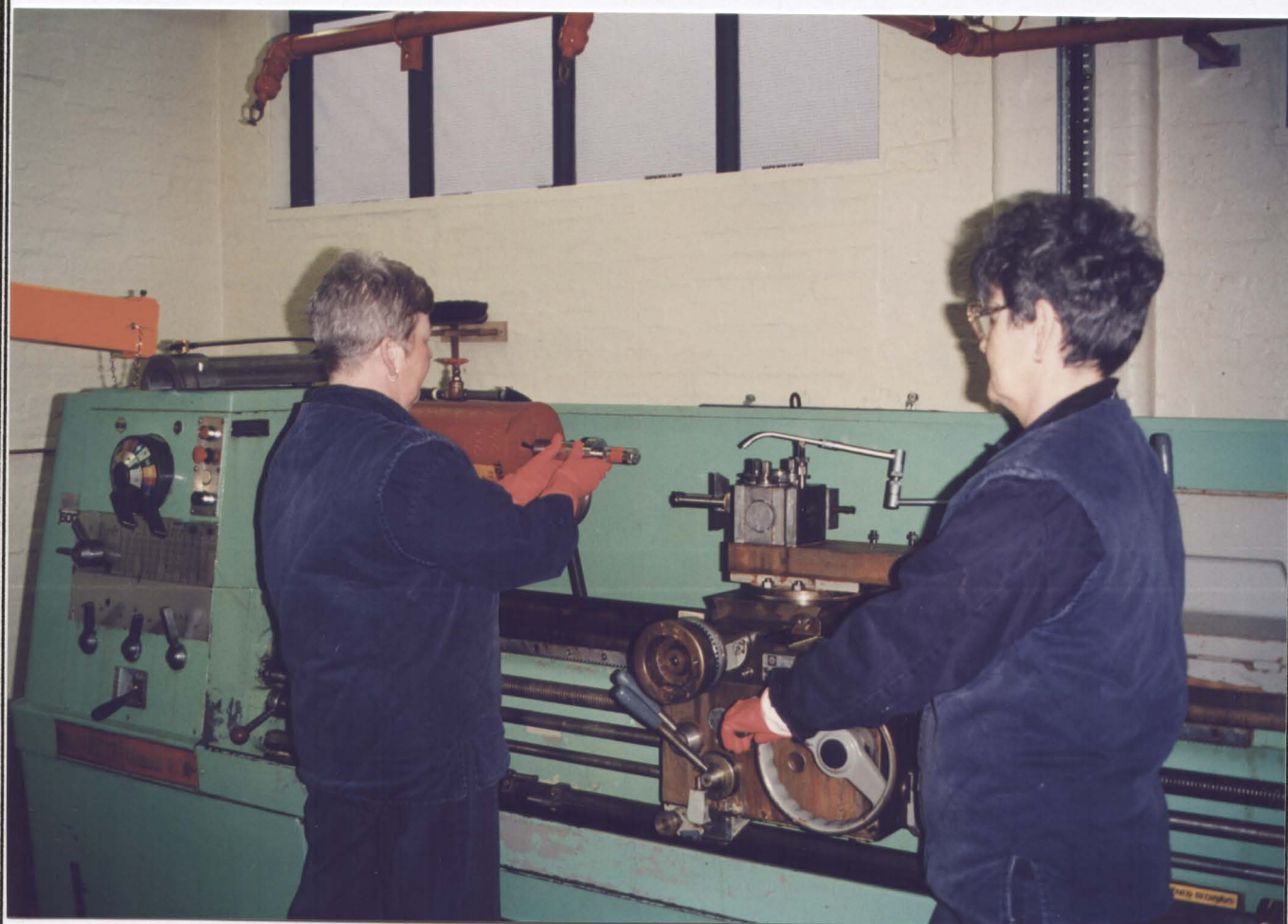
14. CUTTING TO LENGTH EXTRUSIONS FROM 22.5" PRESS



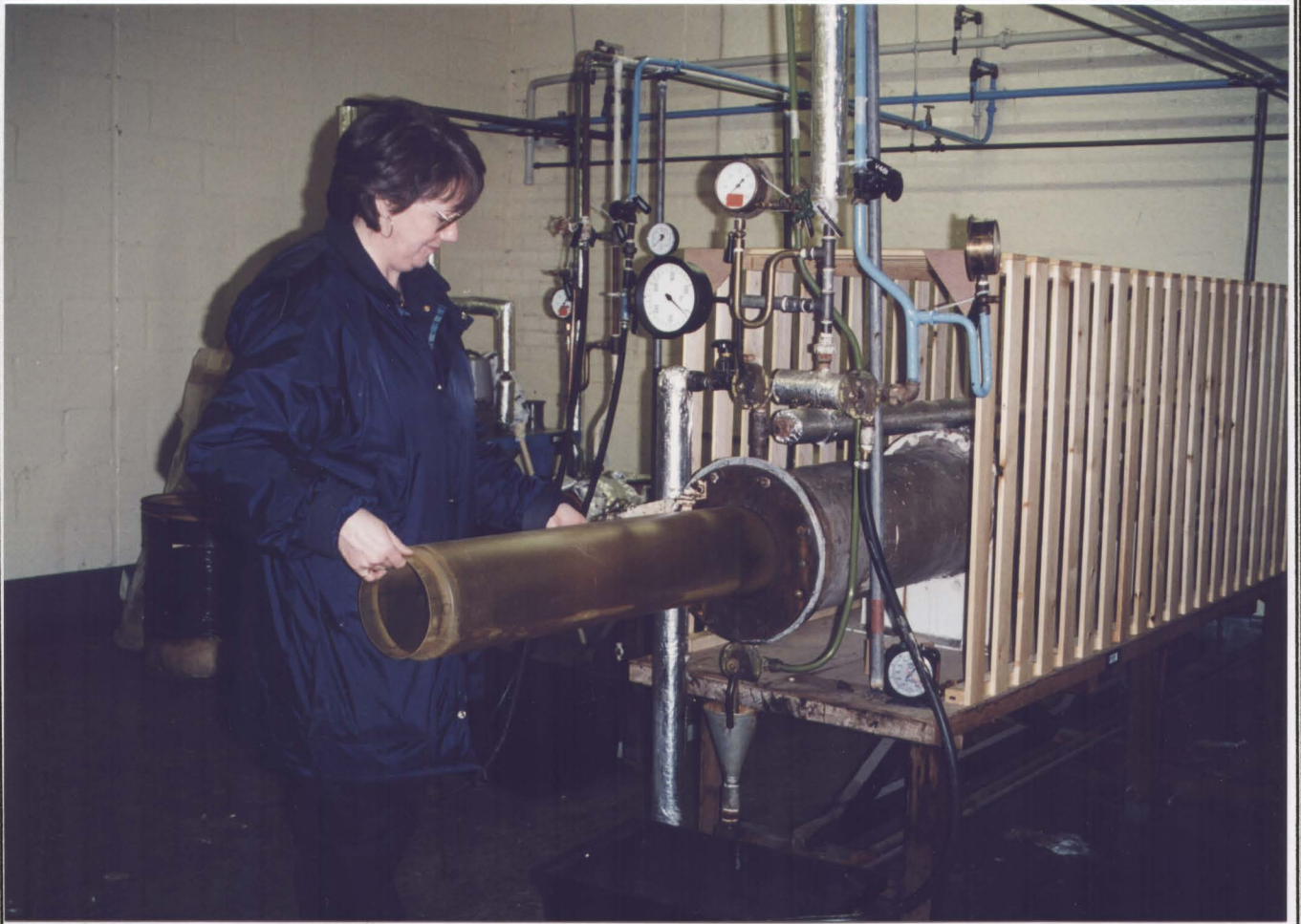
15. QUALITY INSPECTION OF X-RAY CHARGES



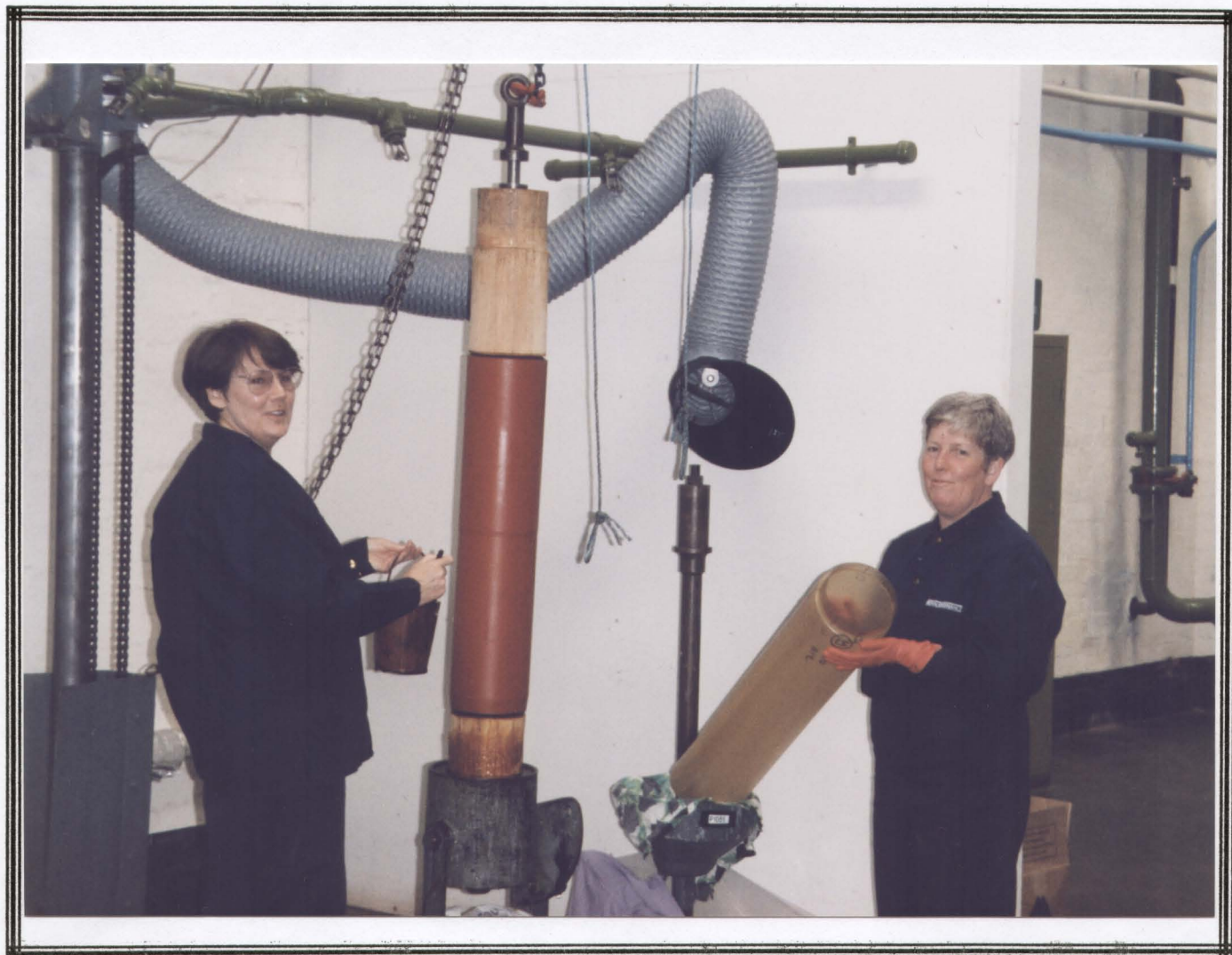
16. SAWING OF CHARGES AFTER X-RAY VERIFICATION



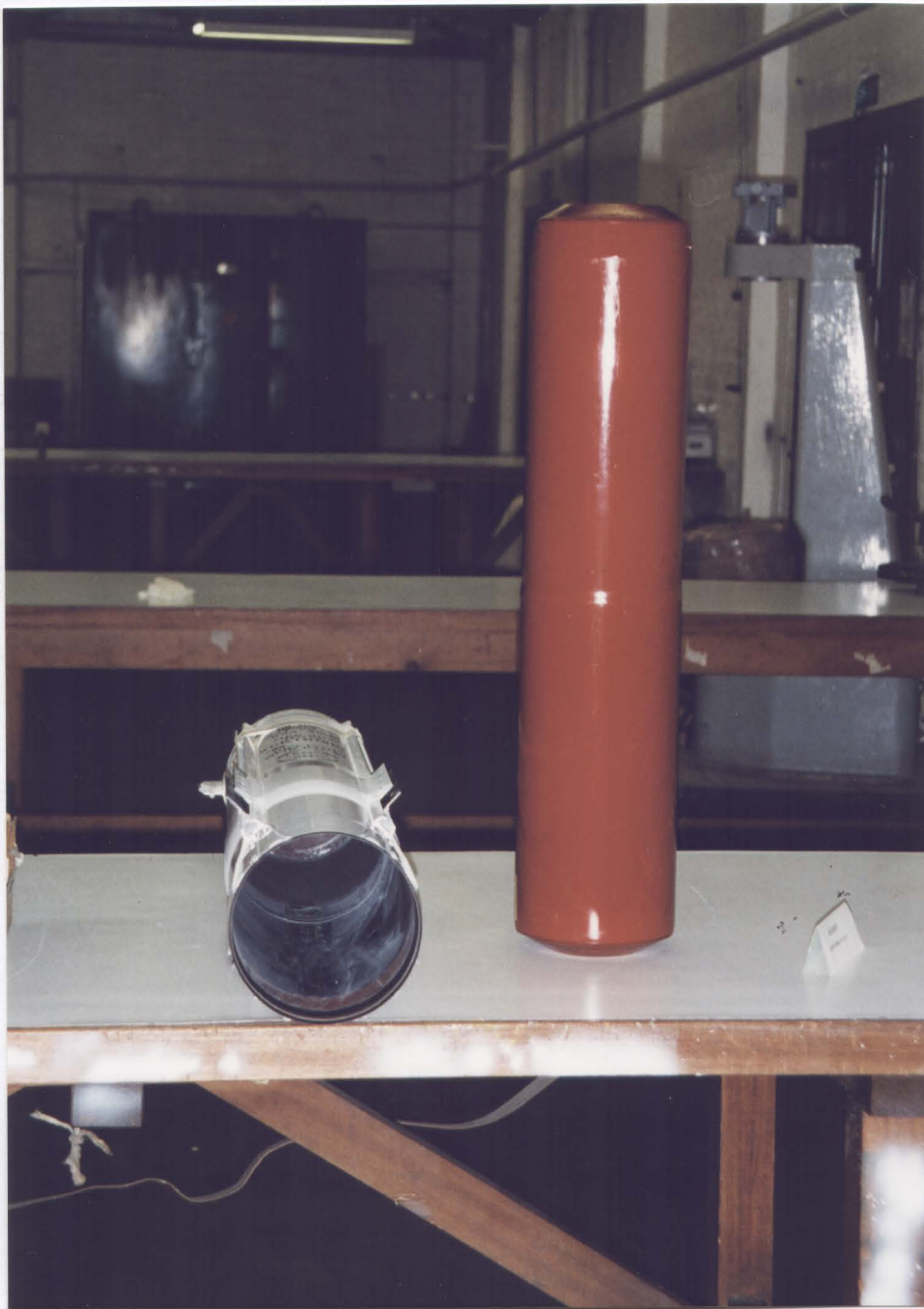
17. MACHINING OF CHARGES



18. ETHYL CELLULOSE COAT EXPANSION



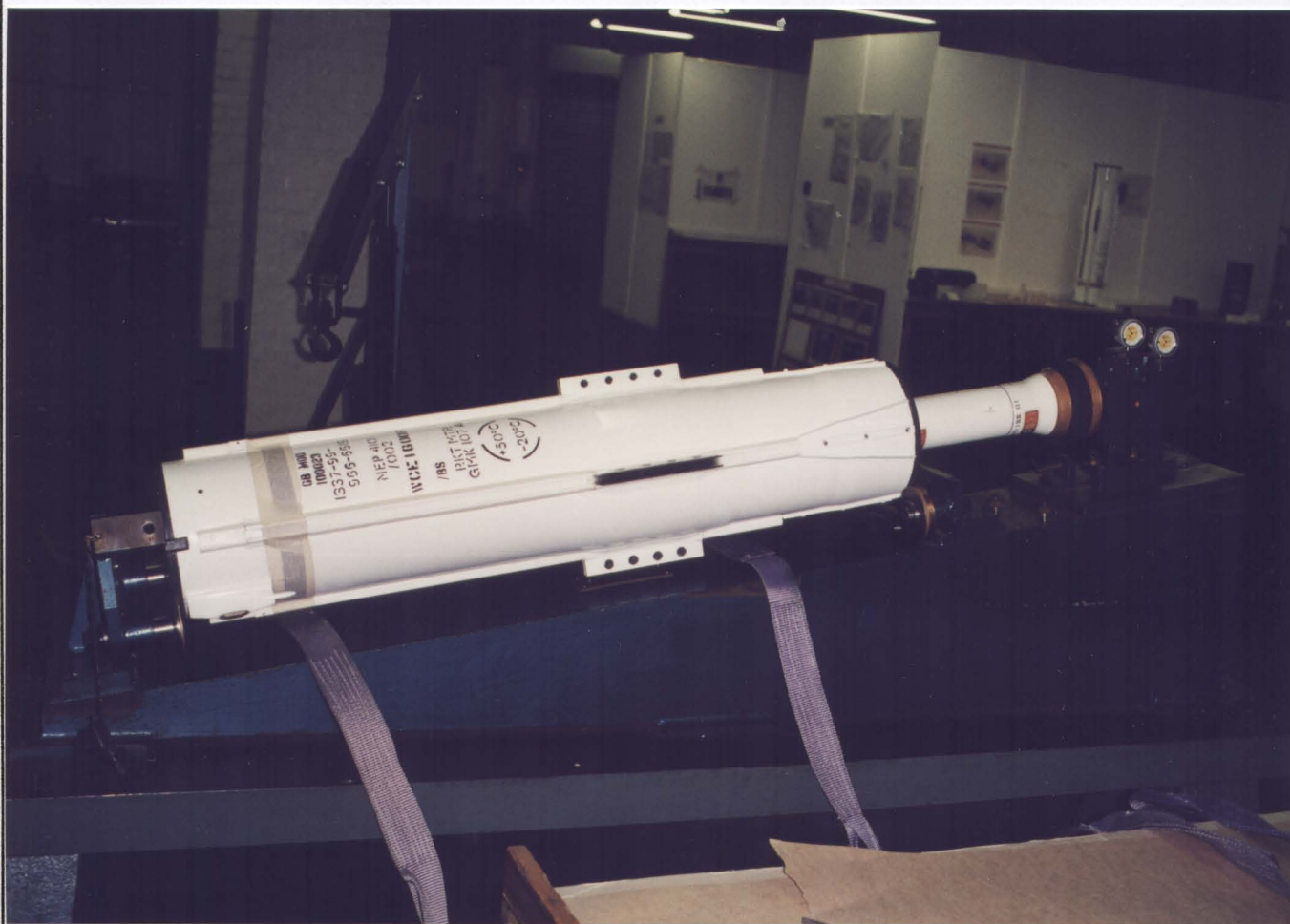
19. ETHYL CELLULOSE COAT PREPARATION



**20. COATED CHARGE AND EMPTY
MOTOR BODY**



21. PREPARATION FOR MOTOR ASSEMBLY



22. THRUST ALIGNMENT OF COMPLETED ASSEMBLY



23. BLACKCAP AND REDSTART CHARGE CONDUIT CONFIGURATION

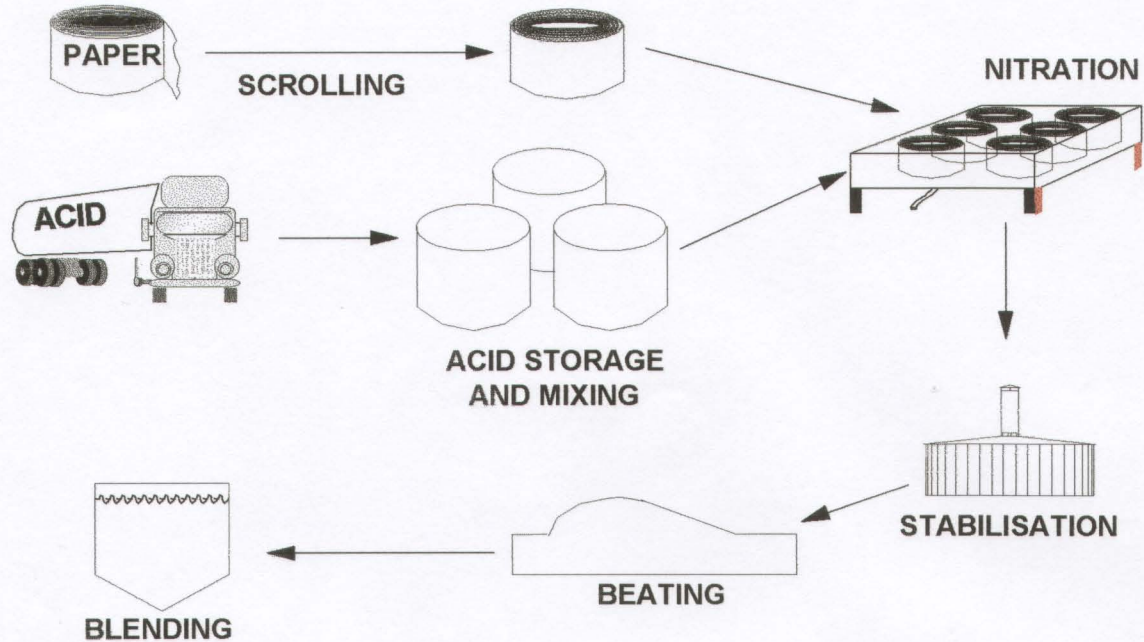


24. REDSTART ASSEMBLY

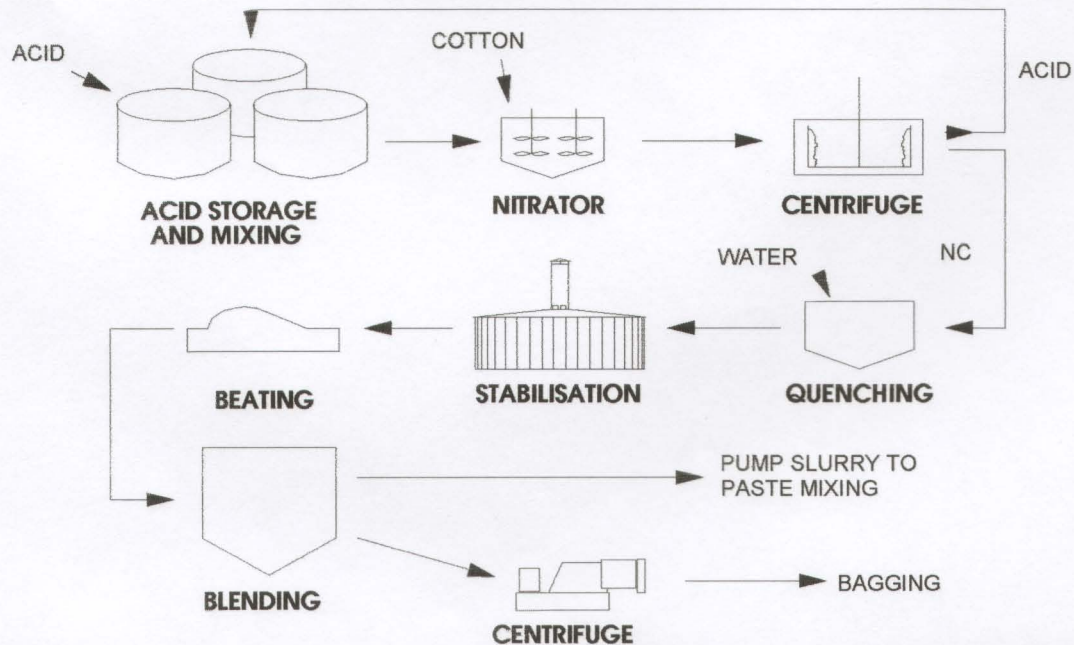


25. REDSTART ASSEMBLY

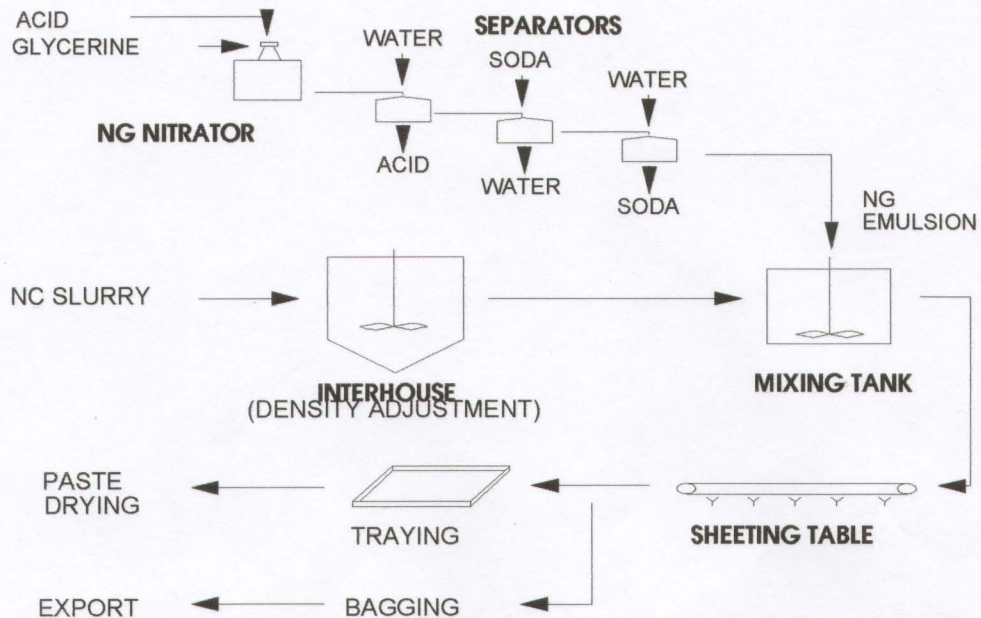
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