

THE ROYAL GUNPOWDER FACTORY

WALTHAM ABBEY

FLOW DIAGRAMS



Flow Diagram for the Manufacture of Black Powder

Saltpetre Refining

Sulphur Refining

Charcoal Production

Sulphur and Charcoal Pulverised and Sieved

Mixing
75 parts Saltpetre
15 parts Charcoal
10 parts Sulphur

Incorporating

Millcake

Breaking Down the Mill Cake

Pressing

Presscake

Pebble Powder
Cutting

Granulating

Foul Grain

Dusting

Moulded Powders

Glazing

Stoving

Finishing - final glazing & dust removal

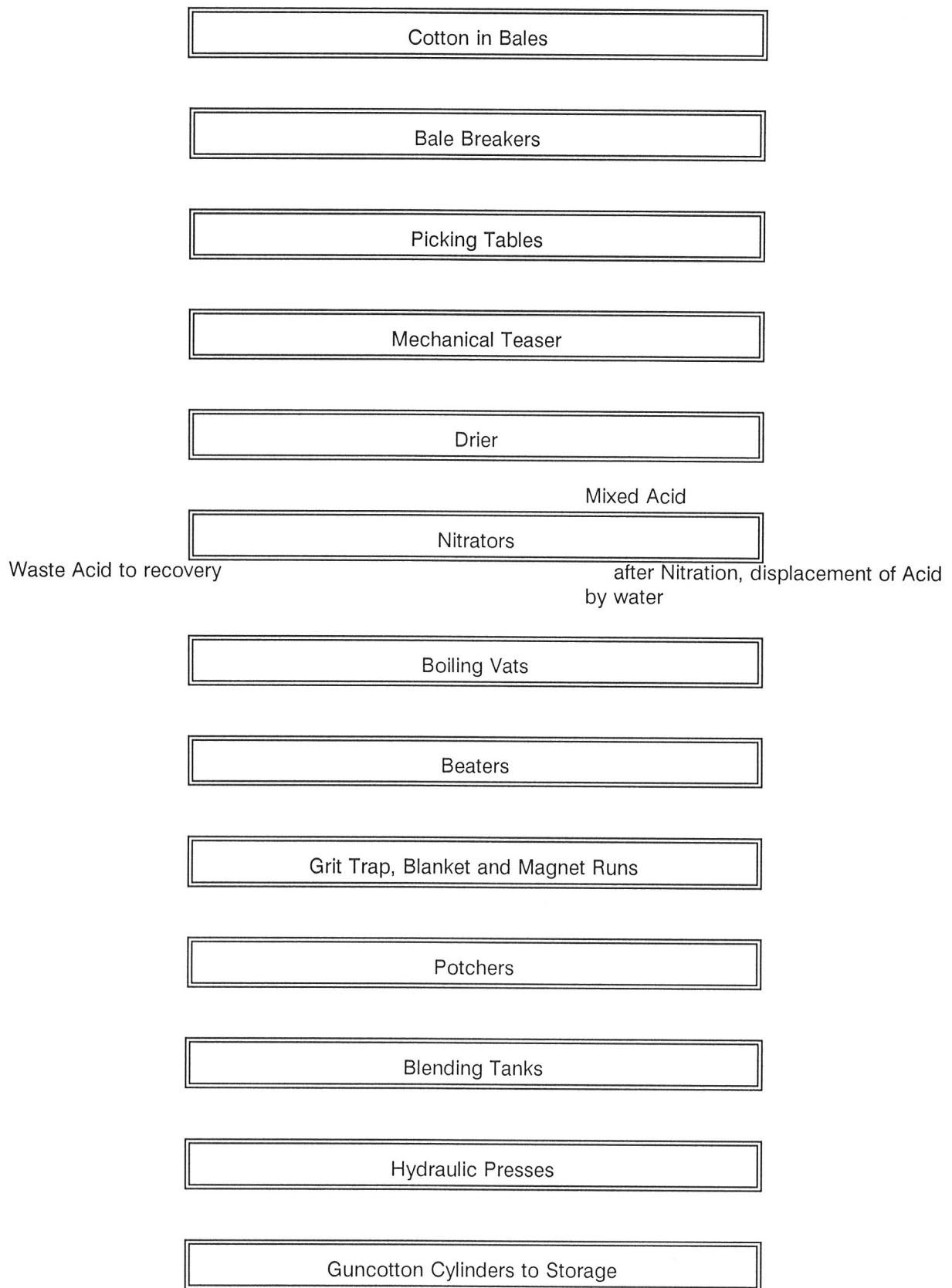
Blending and Packing

Storage in Factory Magazine

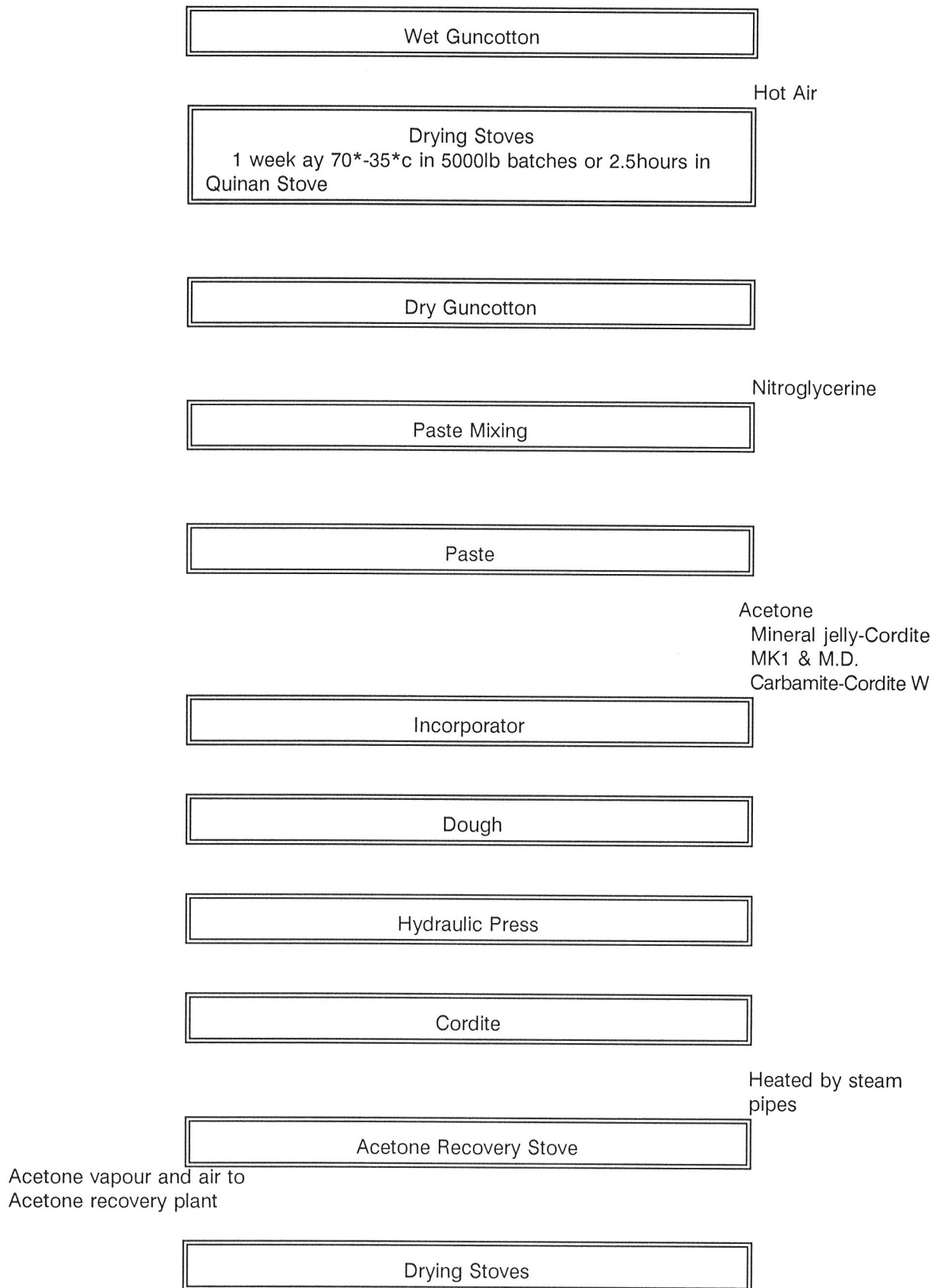
Shipment to Government Magazines

after: Wardell W H 1888 Handbook of Gunpowder and Guncotton HMSO

Flow Diagram for the Manufacture of Nitrocellulose. For Cordite M.D. or Guncotton



Flow Diagram for Manufacture of Cordites M.D. and W



Samples for volatile matter test

Blending

Lotting and Gauging

Store - Magazine

after: War Office 1938 Text Book of Explosives used in the Service

Flow Diagram for Manufacture of Nitroglycerine

Rintoul-Nathan Process

Sulphuric Acid 59%

Nitric Acid 39%

Water 2%

Hot Air

Nitrator - Mixed Acids 2.6 tons

Nitroglycerine

Glycerol

Prewash and Labyrinth

Acid Nitroglycerine

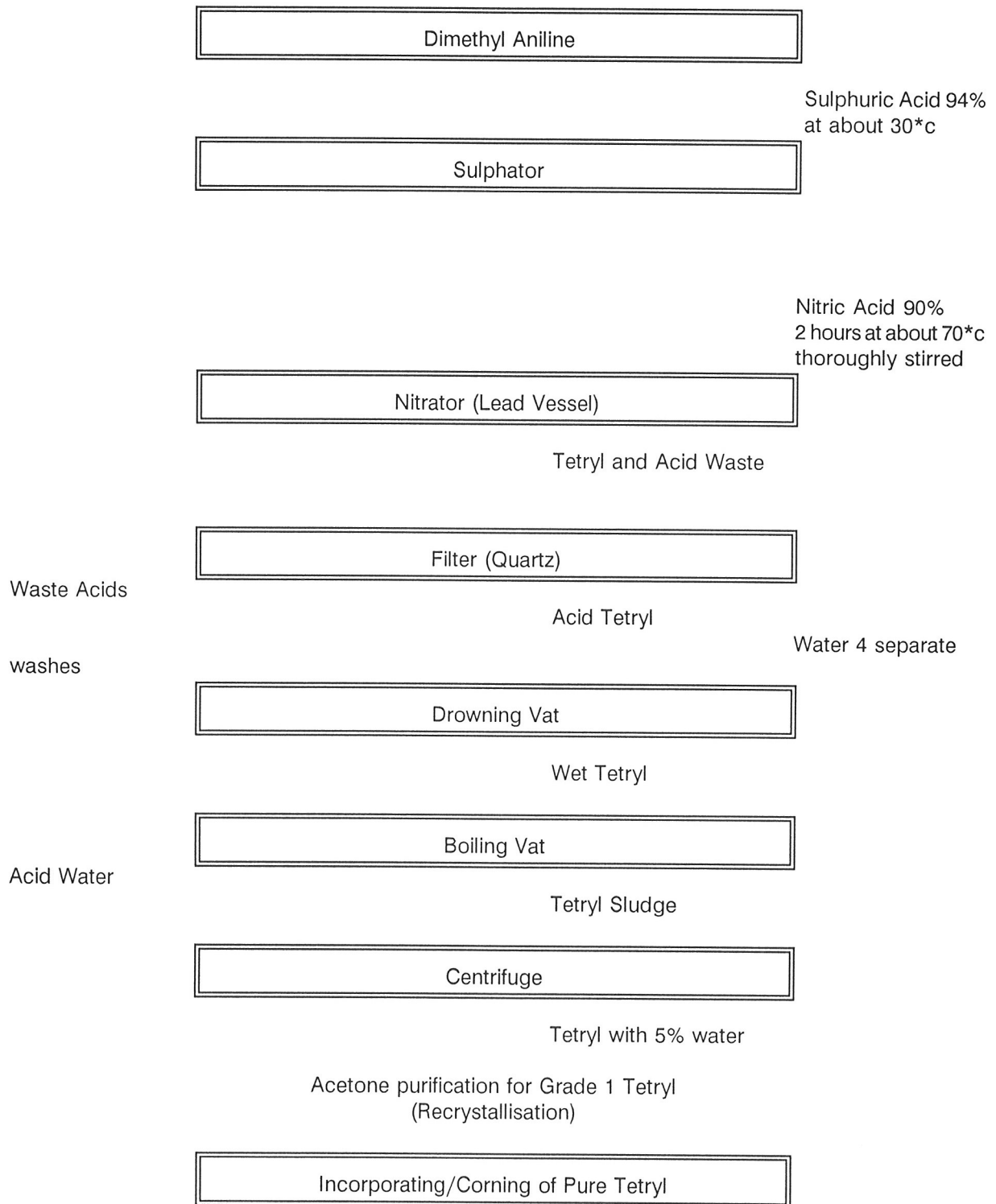
Washing House - Five washings sodium carbonate added

Nitroglycerine run to Mixing Houses

Heated by steam pipes

Wash Water Settling House

Flow Diagram for the Manufacture of Trinitro-phenyl-methyl-nitramine (aka Tetryl or Composition Exploding C.E.)



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