

WASC 2310

Ron Treadgold's
Notes on some
SS buildings

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SOUTH SITE ca 1970 ~ 80

Recollections (after 12 years!) of the functions of buildings under SP2, adjacent to the south boundary fence and Sewardstone Road.

P757

Mainly a Laboratory, for small scale production control etc, particle size determination, propellant densities (for air occlusions), general analysis, viz moisture, viscosities, physical properties.

also office for superintendants & p/A, section leader.
small workshop, darkroom.

P. 720*

Small scale (up to 10kg) plastic propellant batches for rheological & ballistic assessment.

Strand burner; small ballistic ass. motor
felling (K rounds, ca 2" x 10")
ingredient stores.

P. 758

Small scale rubbery propellants prepared, with oven drying of ingredients and curing of filled motors.

* Story of a nasty fire (no casualties) ca ^{mid} 1970's, when someone (a scientist of course) used pot permanganate as oxidiser in a mixture caught fire after about 2 hours. Cf. Glycine & Pot Permanganate!

P719

Non explosive store bays.

Laboratory — tensile testing, particle size determination, moisture determination, densities, also feasibility studies on novel testing and motor filling methods (eg direct filling of LAW motors with short burning time charges — by R.T.!).

Electric truck stationed for section use.

P720

P750

Shift changing room and lunch/tea facilities. Showers, lockers, chairs & tables.

P721

Offices — section foreman, & group office assistant (who recorded day to day business, entered results etc into record books, overtime details etc)

Front office for section leader (during my stint; 54-84, we had George Smith, Barry Newman, John Scrivener, Graham Spickernell, John Vernon [he was the softie; planted a rose garden outside — you should see it now!] and Bernard Tucker)

Other offices for various PSO's, SSO's; and tea making room and ladies withdrawing room.

Further along we come to the section engineer/fitters workshop — he was available on site for day to day maintenance and would also carry out

Limited modification to plant and 'mock ups' on request from scientists etc.

A K round and small motor preparation room where these were assembled with appropriate sized chokes and igniters, for bedding down on the proof stand, for ballistic assessment.

Fired motors were cleaned here, with water and scrubber, followed by dip in "de-watering oil"

P726.

Mounded proof stand, used for motors up to ca ~~6" x 24"~~ (but-but 150 x 600). K rounds were also fired (vertically) in Blg P753.

P727

A 'hot & cold' store, for temp cycling, and hot and cold firings over a range of ca $+60^{\circ}\text{C}$ ~ -40°C . Originally cared for by an ex sailor, who polished all the brass pipework and gauges until the place looked ~~like~~ like a ship's engine room! Then along comes some iconoclast who painted everything matt black. I think our sailor jumped overboard — never seen again!

P723

Large scale (50kg) plastic prop manufacture incl. ammonium perchlorate milling (pin mill, or air driven micropulveriser, giving a wide range of particle size ca $500 \text{ cm}^2/\text{gm}$ to $20,000 \text{ cm}^2/\text{gm}$ for use in slow ~~and~~ v. fast burning compositions. Ovens for drying and storage of ingredients.

Polysobutene binder preparation, i.e. blending and addition of additives (surfactants).

Carried out in large toffee stirrers w. central blade. & Some early work employed differential rubber masticator rollers to improve plasticity of propellant. An operation with considerable hazards - ask Jim Freer if he's still around!

Mixers normally used were the horizontal double bladed type, as used in the food industries (Baker-Perkins)

P. 724

'Pugmill' (ex pottery industries) de-aerator here for de-aerating plastic propellant prior to filling intermediate size motor tubes ca 150mm diam (I recall they were once called Pendine Boost motors - they must have given some device a gee-up across Pendine Sands!)

Horizontal presses slowly pushed a metal former into the charged motor tube to create the star centred charge, then withdrawn - all clever stuff eh. Oven bay for storage and pre heat.

(5)

P729

An annex to P724, accessed along a passage. Here we tried out various novel filling, mixing and de-aerators (I recall a co-ax vertical single shaft de-aerator - designed by the drawing office at the idea and suggestion of - guess who - you've got it ~~RT!~~)

Well, the sun's over the yard arm, so I'll now retire from my little studio (shed!) at the end of the garden and set up the pre-prandial drinky-pooos! Good Luck with this rambling treatise!

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Antter out for Steve Chaddock - as if he hasn't enough to worry about.