

List of Major items procured on LTE basis in Nalco

SL No	Items	Annual Requirement (Approx)	Plant
1	<p><u>Sulphuric Acid:</u></p> <p>SULPHURIC ACID TECHNICAL GRADE SULPHURIC ACID AS PER IS: 266/1993 (REAFFIRMED 2003 WITH AMENDMENT-1)HAVING THE SPECIFICATIONS AS MENTIONED BELOW:</p> <ol style="list-style-type: none"> 1. TOTAL ACIDITY (AS H₂SO₄): 98% MIN BY MASS. 2. RESIDUE ON IGINION :0.2%(MAX)BY MASS. 3. IRON(AS Fe) : 0.05%(MAX) BY MASS. 4. HEAVY METALS (AS LEAD):0.005 %(MAX) BY MASS. 5. ARSENIC (AS AS):0.004 %(MAX) BY MASS. 	700 MT	Alumina Refinery, Nalco, Damanjodi
2	<p><u>Coal Mill Liners:</u></p> <p>CYLINDRICAL LINER(HIGH CHROME)AS PER DRG NALCO/MECH/SPP/3301 SHEET 1 TO 5 MUST HAVE FOLLOWING CHEMICAL COMPOSITION AND PHYSICAL PROPERTIES: C-2.4-2.8%;CR-22.0-28.0%;MN-1.5% MAX NI-0.5%MAX;MO-0.6%MAX HARDNESS-57-62 RC RETAINED AUSTENITE:MAX 5% PRIMARY CARBIDES IN MARTENISTIC MATRIX.</p>	288 Nos	Alumina Refinery, Nalco, Damanjodi
3	<p><u>MS ERW Steel Pipe:</u></p> <p>Size: 350 NB Thickness of Pipe: 9.5 mm thick (minimum) Confirming to IS with Gr.: IS:3589, Gr. Fe 410 End Connection: Bevelled End Working Pressure: 26 Kg/sq cm(g) Test Pressure: Pipe shall be tested hydraulically as per relevant Standard at twice the working pressure. Required pipe length for each pipe segment: 10 to 12 M (preferably).</p>	7000 to 8000 Mtr	Captive power Plant, Nalco, Angul
4	<p><u>POLY ALUMINIUM CHLORIDE (LIQUID)</u> OF HIGH BASICITY USED FOR TREATMENT OF RAW WATER CONFIRMING TO IS: 15573:2005 OR LATEST REVISION</p>	600 MT	Captive power Plant, Nalco, Angul
5	<p><u>BORIC ACID GRANULAR</u></p> <p>TYPICAL CHEMICAL ANALYSIS AS PER FOLLOWING: BORIC OXIDE(B₂O₃): 56.22% WATER(H₂O) : 43.58% CHLORIDE(CL) : 0.01% SULPHATE(SO₄) : 0.1% IRON(Fe) : 0.005% ASSAY(H₃BO₃): 99.5% MINIMUM</p>	100000 KG	Smelter Plant, Nalco, Angul

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6	<p><u>THERMOCOUPLE N TYPE</u></p> <p>211 D X 270 D X L 1120 MM ELEMENT: MINERAL INSULATED THERMOCOUPLE TYPE N, NICROBELL D SEATH MATERIAL, SEATH DIA 8 MM OD INTERNAL SEATH: CERAMIC KER 710 PROTECTING TUBE- 17 OD X 13 ID MM CLOSED AT BOTTOM END EXTERNAL SEATH: SEAMLESS / EXTRUDED PROTECTION TUBE (THERMO WELL KANTHAL APM 26.67 MM OD X 20.93 MM ID CLOSED AT BOTTOM END) DIE CAST ALUMINIUM HEAD (TYPE A) WITH CERAMIC BLOCK SPECIAL CABLE ENTRY GLAND EXTENSION WIRE AS SILICON RUBBER INSULATION / FIBRE GLASS JACKET WITH SS OVER BRAIDING OVERALL (3 MTR LONG) WITH JAB IN MALE FEMALE CONNECTOR THE THERMO COUPLE SHALL BE SIMPLEX, UNDERGROUND LENGTH BELOW TERMINAL BLOCK : 1110 MM COMPLETE WITH TERMINAL BLOCK AND TERMINALS. THE ABOVE MATERIAL MUST BE SUITABLE TO WITHSTAND A MAX TEMP OF 1300 DEG CENTIGRADE FOR SHORT DURATION AND CONTINUOUS TEMP OF 1160 DEG CENTIGRADE IN CARBURISING SULPHUROUS ATMOSPHERE OR OTHER REDUCING ADVERSE CONDITION OF OUR FURNACE</p>	300 Nos	Smelter Plant, Nalco, Angul
7	<p><u>ALUM {NON-FERRIC}</u></p> <p>TECHNICAL GRADE CONFORMING TO IS: 260/2001 OF LATEST REVISION (SUPPLIED IN 500GM TO 3KG PIECES PACKED IN 40KG NEW HDPE BAG.</p> <p>DEVIATION IN PRODUCT PURITY WOULD BE ACCEPTED WITH PRORATA DEDUCTION WHICH IS AS FOLLOWS:</p> <p>i. ALUMINA CONTENT BELOW 17% UP TO 15% WILL BE ACCEPTABLE WITH PRORATA PRICE DEDUCTION FOR EVERY 0.1% VARIATION @ 0.6% ON LANDED COST. BEYOND THIS RELAXATION, THE MATERIAL SHALL BE OUTRIGHTLY REJECTED.</p> <p>ii. PH VALUE OF 5% SOLUTION UP TO 2.8 (MIN.) WITH PENALTY FOR EVERY 0.1% VARIATION @ 0.2% ON THE LANDED COST.</p> <p>iii. INSOLUBLE MATTER UP TO 0.3% (MAX.) WITH PENALTY FOR EVERY 0.01% VARIATION @ 0.05% ON THE LANDED COST.</p> <p>iv. IRON CONTENT UP TO 0.01% (MAX.) WITH PENALTY FOR EVERY 0.001% VARIATION @ 1% ON THE LANDED COST.</p>	720 MT	Smelter Plant, Nalco, Angul

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8	<p><u>STEEL SHOTS OF SS-1400 GRADE.</u></p> <p>HEAT TREATED STEEL SHOTS, GRADE: SS-1400 & AS PER IS-4606 OF 1983(AS AMENDED UPTO- DATE) SIZE:- 2.00MM - ALL PASS. 1.40MM- 85% MIN. ETAIN, 1.18MM-12% MAX. RETAIN PAN-3% MAX.RETAIN NOTE: Chemical Composition: Carbon-0.6 to 1.25% Manganese-1.25% max. Silicon-0.2 to 1.1% Sulphur-0.08% Max. Phosphorous-0.08% Max.</p> <p>Hardness-400-550HV Packing- Steel Shots shall be packed in double line bag each weighing 25KG.</p>	360 MT	Smelter Plant, Nalco, Angul