SYNERGY
EXIM PVT. LTD.

SOLVENT EXTRACTION

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Synergy Exim Pvt. Ltd.

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INTRODUCTION

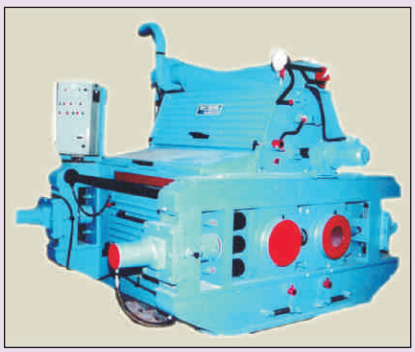
SEPL - We are Technology provider and Plant & Machinery Supplier for Edible Oil refinery, Cotton Seed & Soya Preparation Plant, Solvent Extraction Plant, and Physical Refineries.

SEPL is a professionally managed Indian Private Limited Company promoted by experienced technocrats having long experience in edible oil industry, cotton seed processing, project management and exports.

SEPL provides technology and machinery for Cotton Seed & Soybean preparation, Oil Milling, Solvent Extraction, Vegetable Oil Refining, fractionation and Esterification process. The head office is located at Pune, India and is accessible by Road, Air and Dry Port.

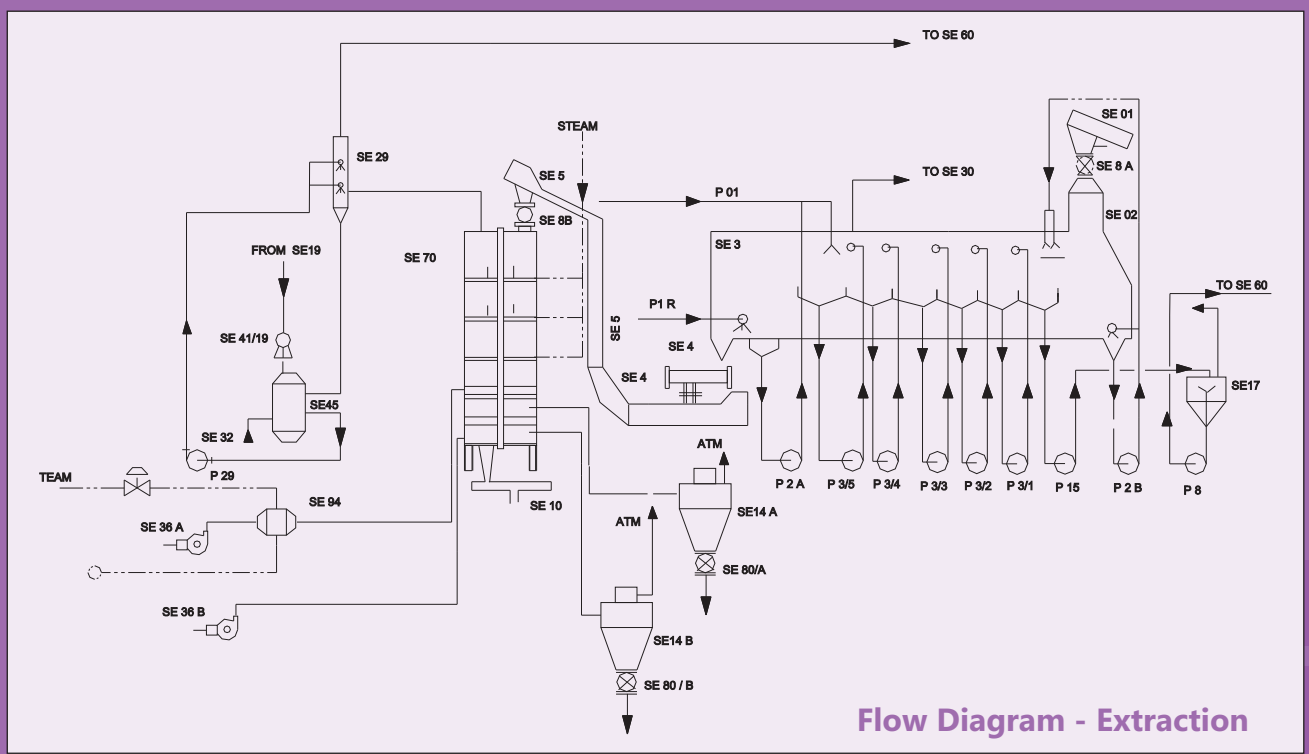
SEPL provides economical state of art technology and support to meet world standard quality with optimal operating cost.

SOYA SEED PREPARATION



A good seed preparation is very critical to good extraction. Oil seeds are first cleaned and the destoned before processing. The cleaned seeds are then cracked in cracking mills having specially designed rolls.

The rolls are grooved and have surface hardness. The cracked beans are then carefully cooked and flaked in hydraulic flakers to produce uniform flakes. These flakes are then transported to the extraction plant for further processing.



Flow Diagram - Extraction

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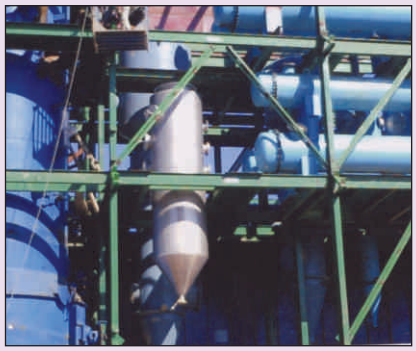
Soya flakes from the preparation section are fed into an Extractor with stainless steel belt. Level in hopper is controlled through an ultrasonic level controller which regulates the speed of the extractor.



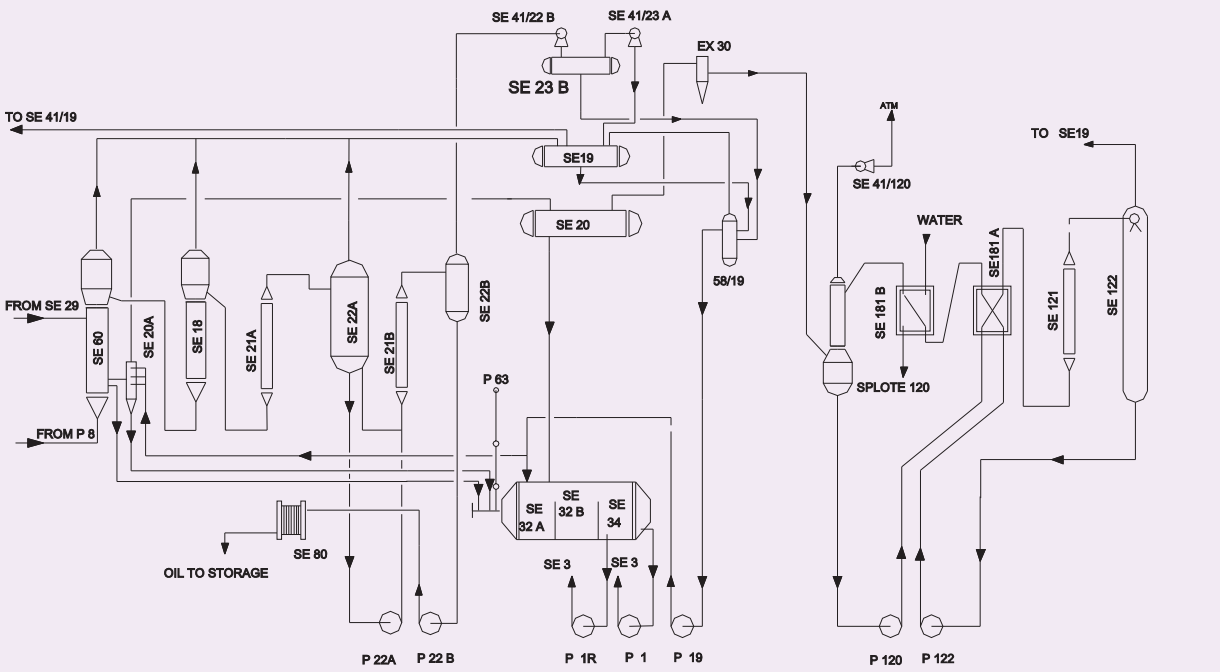
Miscella is filtered through special wedge wire filters.

Distillation comprises of a series of heat exchanges for heat recovery and evaporation of hexane. The oil is finally stripped in a special stripper operating under low vacuum. Series of specially designed condensers with tubes of stainless steel are used for condensing the hexane vapors for recirculation.

The vent gases are scrubbed with mineral oil before discharge into the atmosphere. The hexane content of the gases leaving the system are well below the lower explosion limits. The solvent wet meal is fed through a vapor tight conveyor into desolventiser toaster equipped with special level controllers.

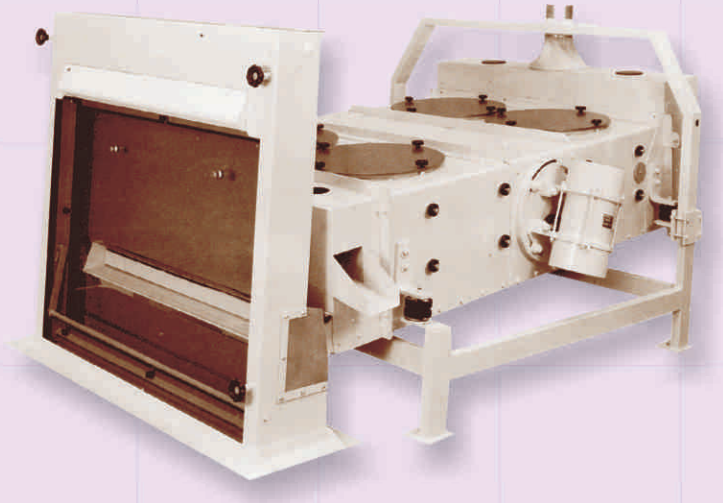
Here the meal is desolventised in a series of stages and subsequently toasted to remove the anti nutritional factors.

The meal is subsequently dried and cooled for bagging.



Flow Diagram - Distillation

DEHULLING



For production of high protein meal it is important that good dehulling operation is carried out. Careful drying of the beans and tempering is essential to enhance quality of the dehulling operation. Multiseparators and efficient screen separators ensure that the meat produced has very low fibre. The hulls produced are ground and pelletized in special machines. Pellets of 6-8 mm. are produced which find good acceptability in feed mills.