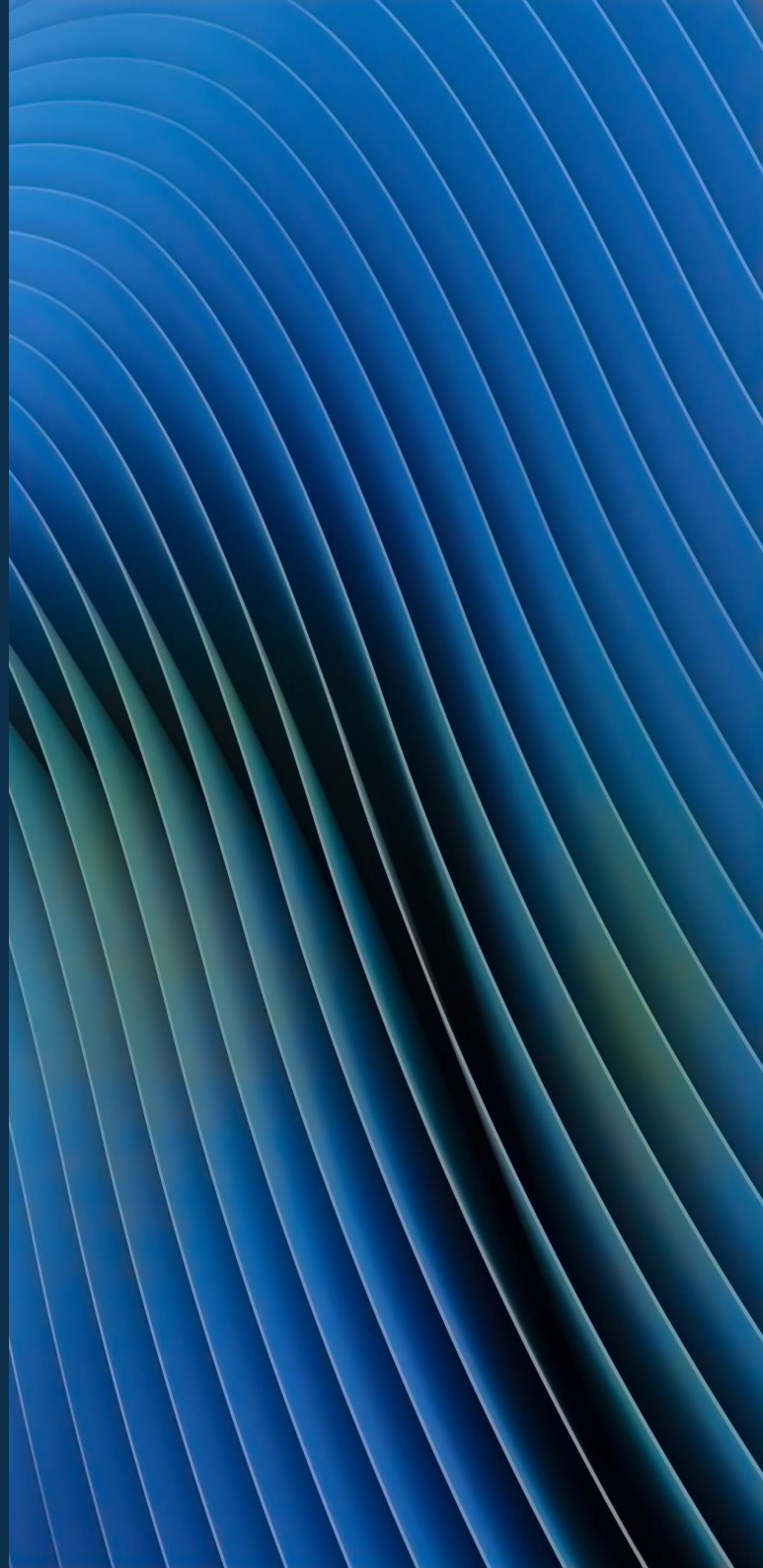
SAVE TECH

Process Engineering and Industrial Technology Solutions

Field-focused engineering from concept to stable production

EDIBLE OILS • SPC • BIODIESEL • SAF • AUTOMATION



We turn investment into an operating, value-generating system

Save Tech Process Consultancy provides process engineering, commissioning and operational improvement services for edible oils, oilseed processing, high-protein soy products, biodiesel and renewable-fuel feedstocks.

Scale to grow.

Field-focused

We validate engineering decisions against actual feedstock, equipment and operating conditions.

End-to-end support

From process design and installation supervision to commissioning and performance optimisation.

Value creation

We address yield, quality, energy, safety and by-product economics as one integrated system.

Our industrial expertise spans complementary fields

Oilseed Processing

Preparation and extraction of soybean, sunflower, canola and other oilseeds.

Edible Oil Refining

Degumming, neutralisation, bleaching, winterisation and deodorisation.

SPC and Protein Technologies

High-protein products, solvent recovery, drying and molasses management.

Biodiesel and Renewable Fuels

FAME from waste oils; SAF/HVO feedstock pretreatment and process optimisation.

Boiler and Cogeneration Systems

Steam generation, heat recovery, power-heat integration and commissioning.

Automation and Process Control

PLC/SCADA, recipe management, interlocks, data acquisition and reporting.

Our core services cover the full investment life cycle

- Process design, mass and energy balances, and capacity analysis
- Plant layouts, PFD/P&ID development, and equipment specifications
- Process simulation, bottleneck analysis, and capacity expansion studies
- Installation, commissioning, and integration of boiler and cogeneration systems
- Automation, PLC/SCADA integration, and safety interlock design
- Installation supervision, FAT/SAT, loop checks, and mechanical completion follow-up
- Commissioning, operator training, and performance validation
- Technical management and coordination of investment-incentive processes

One objective

A technically functional, safe, measurable and economically sustainable process.

Our delivery model: define, validate, engineer, implement, improve

01

Definition

Objectives, feedstock, capacity, quality, and site constraints

02

Validation

Analysis, simulation, pilot tests, and feasibility

03

Engineering

Process, equipment, automation, and safety

04

Implementation

Installation follow-up, testing, and commissioning

05

Improvement

Ramp-up, performance, training, and optimisation

We eliminate gaps between technical coordination and field execution.

Each stage provides measurable data and clear acceptance criteria for the next investment decision.

An integrated approach to oilseed processing and refining

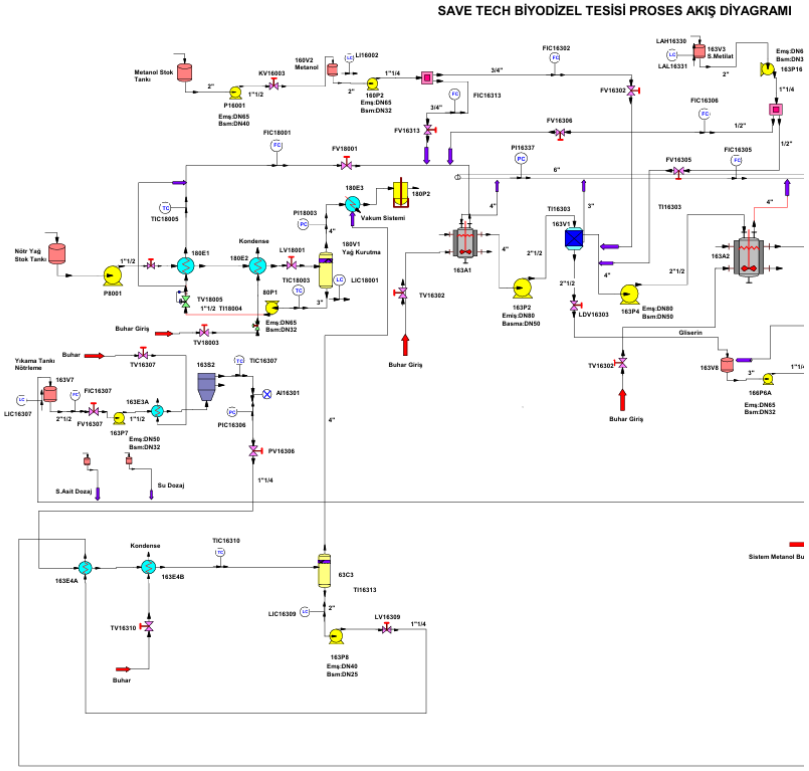
- Feedstock preparation, cracking, flaking, extraction, and desolventisation
- Crude oil refining: degumming, neutralisation, bleaching, and deodorisation
- Optimisation of product losses, chemical consumption, energy, and capacity
- Heat recovery, economiser applications, and utility integration
- Root-cause analysis for quality deviations and process-parameter development

Example solution

Increasing refinery yield by recovering the oil retained in oily perlite.

Process development for biodiesel and renewable fuels

- Biodiesel processes from waste oils, developed with local technology and engineering to meet EN 14214
- Optimisation of transesterification, esterification, washing, and product purification
- Plant improvements for Sustainable Marine Blending Component applications
- SAF/HVO feedstock preparation solutions from UCO and animal fats
- Optimisation of capacity, yield, methanol consumption, and energy use
- Automation, recipe management, and quality traceability



WBE dosing technology converts waste into value and safety

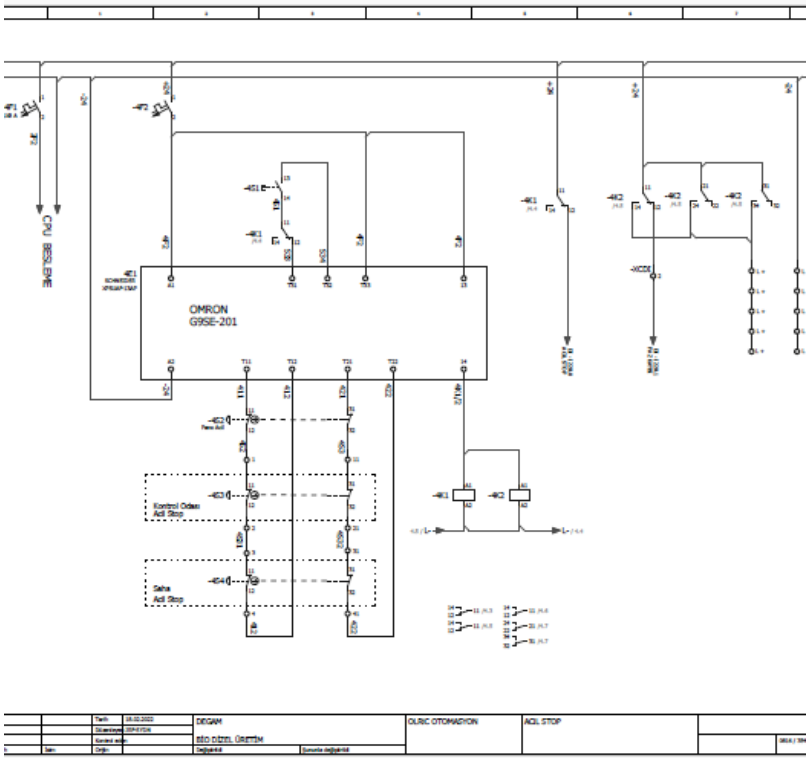
- Preparation of an oily Used Bleaching Earth suspension and stabilisation of the process stream
- Controlled and homogeneous dosing through mass-flow measurement
- DTDC/product-line integration with alarms and safety interlocks
- Elimination of uncontrolled free accumulation, reducing self-heating and spontaneous-combustion risk
- Batch records, recipe tracking, and complete process traceability
- Industrial implementation experience in Türkiye and Russia

Value proposition

Preserve oil value • improve process safety • enable controlled and traceable production

PLC and SCADA make the process visible and manageable

- Process instrumentation and control philosophy
- PLC software, SCADA screens, and recipe management
- Alarm, interlock, permissive, and emergency-shutdown scenarios
- Trend monitoring, reporting, and production-data archiving
- Commissioning tests, loop checks, and field validation
- Simple, reliable, and operator-focused control interfaces



Pilot and laboratory studies reduce investment uncertainty

- Small-scale testing of new product and process concepts
- Determining the effect of feedstock variability on process performance
- Generating critical parameters and scale-up data
- Laboratory-equipment selection, method development, and quality-control planning
- Converting pilot results into mass balances and commercial feasibility

Outcome

Lower technical uncertainty, more accurate equipment sizing, and a safer investment decision.

Our SPC experience extends from installation to stable production

The Save Tech team has direct field experience in the installation, commissioning, and production phases of an industrial-scale Soy Protein Concentrate plant.

- Mechanical completion and process commissioning
- Water tests, solvent commissioning, and production ramp-up
- Stabilisation of protein, colour, moisture, and functionality targets
- Optimisation of solvent recovery and energy consumption
- Capacity tests, bottleneck analysis, and continuous production improvement
- Operator training and preparation of procedures and checklists

Support after SPC technology selection

Detailed Engineering

Coordination of supplier documents with site and process requirements.

Installation and Testing

Installation supervision, mechanical completion, FAT/SAT, and loop checks.

Commissioning

Water tests, solvent commissioning, safe start-up, and production ramp-up.

Performance

Capacity, product-quality, solvent, steam, energy, and water-consumption tests.

Operations

SOPs, shift checklists, and training for operators and maintenance teams.

Optimisation

Bottleneck removal, yield improvement, stable production, and loss reduction.

Boiler and cogeneration systems

Steam Boiler Systems

Determination of boiler capacity and steam parameters; coordination of fuel, burner, feedwater, deaerator, blowdown, stack, and water-treatment systems; installation supervision, cold and hot testing, commissioning, and performance verification.

Cogeneration Systems

Combined analysis of electricity and heat demand; gas engine or turbine, generator, heat-recovery boiler, hot-water/steam integration, grid synchronisation, load management, and safety scenarios.

- Feasibility based on fuel consumption, boiler efficiency, and energy balance
- Field coordination of mechanical, electrical, automation, and process disciplines
- FAT/SAT, protection tests, first firing, synchronisation, and load acceptance
- Acceptance criteria, capacity/efficiency testing, and operations-team training

Coordination of investment-incentive processes

Industrial investments require not only engineering, but also a sound incentive strategy and disciplined implementation follow-up. Save Tech maintains alignment between the technical investment scope and the incentive file.

Investment Classification

Clarification of capacity, product, machinery, energy, and technology scope.

Technical File

Preparation of process descriptions, capacity reports, equipment lists, and investment rationale.

Application Coordination

Technical coordination with consultants and authorities for incentive, grant, or support applications.

Implementation Follow-up

Monitoring procurement and expenditure items against the approved investment scope.

Change Management

Correct reflection of capacity, equipment, schedule, or budget changes in the file.

Completion Process

Coordination of technical records, reports, and closing activities for the completed investment.

SPC molasses is a distinct value chain

- Monitoring dry matter, sugar profile, protein/nitrogen, ash, viscosity, and colour
- Maintaining product quality and energy balance through concentration and heat integration
- Managing crystallisation, microbial deterioration, and pumpability risks during storage
- Developing specifications for feed, fermentation, or technical applications
- Converting the by-product into a standardised, traceable, and commercially valuable product

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