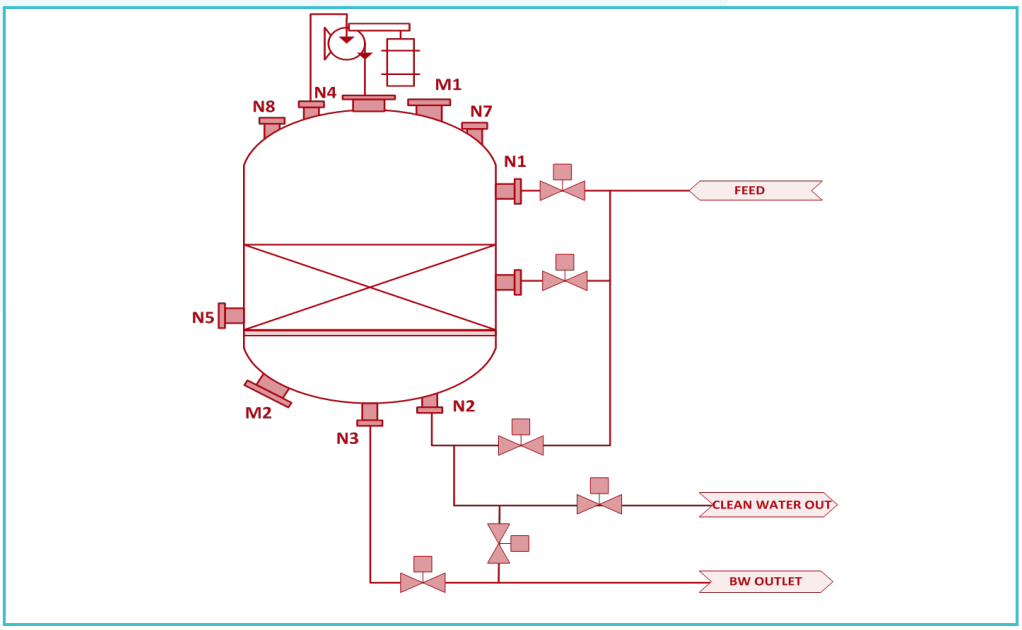
ProSep

DEEP BED NUTSHELL FILTER

ProSep provides high performance Deep Bed Nutshell Filters that remove up to 98% of free and dispersed hydrocarbons and solid particles greater than 5 microns.



BENEFITS

+ Reduced backwash frequency due to deep bed design
+ Influent stream used as backwash water stream, thus eliminating storage and pumping
+ Nutshell media is less susceptible to fouling or plugging when compared to other sand or multimedia filters
+ Low maintenance
+ Minimal annual media attrition
+ Efficient backwashing design

NUTSHELL FILTER

ProSep's Deep Bed NSF design offers features that provide robust operation with minimal input and maintenance and can be integrated into full system solutions.

ProSep's Deep Bed Nutshell Filter provides superior filtration performance with a backwash system design that provides optimized media cleaning. The backwash system significantly reduces the need for large quantities of backwash water, air scouring and surfactants.

HOW IT WORKS

The Deep Bed Nutshell Filter utilizes the nutshell media particles to form a tortuous path for oil droplets and solid particles to be "strained" from the process stream. Oil droplets and solid particles become trapped in the small crevices between adjacent media particles and are effectively removed from the process stream. If the contaminants are solid particles, as they become trapped, the filter becomes more efficient until resistance to flow builds creating a pressure drop which initiates the backwash cycle.

If the contaminants are predominately hydrocarbons, the bed does not build up a differential pressure and the backwash sequence will be initiated based on time or oil breakthrough.

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NUTSHELL FILTER

Additionally, the filter backwash can be initiated manually if the operator determines a backwash stage is necessary.

If the client requires continue compliance to a specific discharge level, ProSep can supply an on-line oil-in-water analyzer to initiate backwash when the discharge reaches a predetermined set-point. The fluidization nozzle and screen are strategically located in the center of the vessel to insure complete and rapid fluidization of the media bed and effective media cleaning, thereby reducing backwash water volumes.

THE MEDIA

The unique blend of both crushed pecan and walnut shells make for an efficient yet particularly hard and durable filtration media. The media is specially crushed and pre-conditioned to a uniform size determined to provide optimum filtration performance with minimal differential pressure.

ProSep also provides holistic process system optimization, including the backwash sequence and system, to minimize the overall waste volume through use of a backwash decant system.

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