Hindustan Platinum

solutions for refining & reclamation

refining & reclamation

Petrochemical Industries & Oil Refineries employ different types of precious metal catalysts depending on their application, having supports of soluble or insoluble alumina, silica/alumina, zeolites, carbon, etc. Over a period of years, no matter which configuration is used, eventually the catalysts lose their effectiveness, and the remaining precious metals must be recovered.

Hindustan Platinum provides such industries both large and small with integrated services of recovery and refining of precious metals either on toll refining basis or on out-right purchase. Located in Navi Mumbai, India, Hindustan Platinum refines platinum, palladium, rhodium, iridium, gold, silver as well as rhenium from many diverse industrial sources, typically from Petrochemicals & Oil refineries. A few of the catalysts refined are Paraxylene catalyst, Reforming catalyst, Isomerisation catalyst, PTA catalyst, VAM catalyst, Ethylene oxide catalyst, etc.

With an excellent reputation of more than four decades, Hindustan Platinum has established itself as an organization of integrity and reliability - a fact supported by many satisfied customers.

The entire cycle of precious metal recovery is conducted through standardized, environmentally friendly processes. We deliver high yield, high purity final products from both high-grade and low-grade materials.

SAMPLING :

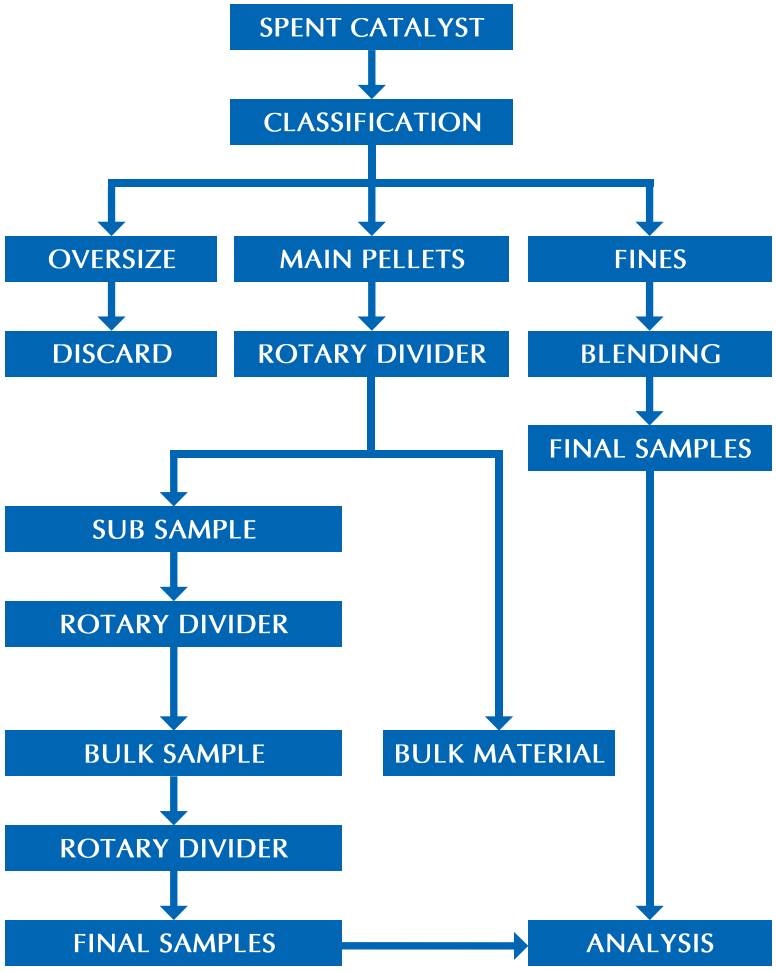
For accurate determination of precious metal content in materials for recovery, appropriate sampling method has to be carried out depending on the type of material being processed. The entire sampling process is carried out in the presence of the customer / representative if they so desire.

Sampling begins by converting the total spent material into a homogeneous mass so that concentration of precious metals and other constituents are evenly distributed. Results of such samples represent an accurate ratio of the precious metal contents in the overall matrix.

Material is subjected to mechanical sampling i.e. first vibro-screened and classified into main, oversize and fines. Generally, oversize does not contain any precious metals and is discarded after confirmation. From the main catalyst and fines, separate sub-samples are taken continuously to arrive at representative samples.

The common practice is to generate representative samples for simultaneous analysis by the Customer, Hindustan Platinum and if required by a mutually accepted Umpire Laboratory.

Flowsheet for Sampling of Spent Catalysts



ANALYSIS :

Our analytical laboratory combines classical, volumetric, gravimetric and fire assay techniques with the latest Inductively Coupled Plasma (ICP) emission spectroscopy and Atomic Absorption Spectroscopy (AAS) to determine accurate precious metal contents in spent catalysts, thus assuring the highest possible returns.

REFINING :

Depending on the type of material to be reclaimed, hydrometallurgical and/or pyrometallurgical processes are followed to achieve the highest possible metal recovery at the lowest possible cost with the shortest turnaround time.

The recovered precious metals are then refined to catalytic grade high purity of minimum 99.95%.

PRECIOUS METAL MANAGEMENT :

The recovered and refined precious metals are returned in form of sponge, ingots, compounds / precursors as per customer's specifications for onward supply to their proprietary catalyst manufacturer. The purity of all recovered precious metals has been accepted by International companies for catalyst manufacturing.

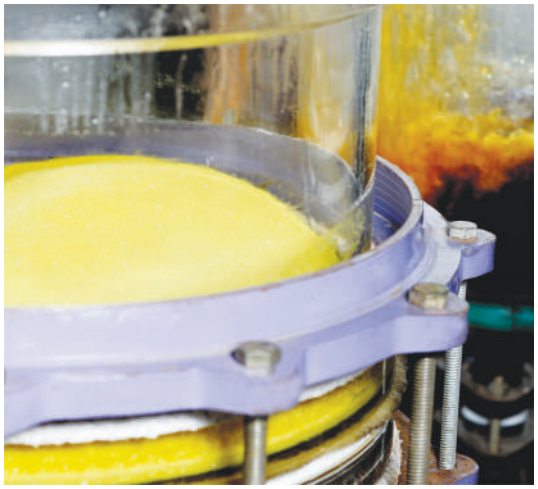
The refined precious metals can also be sold to us based on the current market prices. Customer's account can also be credited at any major pool account.

QUALITY CONTROL :

All our manufactured products before supply undergo rigorous quality control using various testing methods.

THE HP ADVANTAGE

- Logistically located to service Europe, Middle East as well as Far East Asia.
- Modern technologies yielding maximum return of precious metals.
- State-of-the-art facility for unbiased accurate sampling of all materials.
- Reliable analytical methods for accurate precious metal determination.
- Environmentally friendly processes adhering to Air and Water regulations.
- Reclamation of precious metals from wide variety of scraps & spent catalysts at economical processing costs.



the recovery cycle

CATALYST MANUFACTURER

CUSTOMER

MANUFACTURED PRODUCTS

SPENT CATALYST

QUALITY CONTROL

TRANSPORTATION

WEIGHING & AUTOMATED SAMPLING

METAL ANALYSIS & EVALUATION

SETTLEMENT

RECOVERY & REFINING

HIGH PURITY METALS/SPONGE/PRECURSORS