

STEINLEIN & KUNZE
G M B H

k2fconsult

EFFICIENT GRINDING AND SAMPLING

CAT RECYCLING WITH STEINLEIN & KUNZE

FRANK FASSBENDER

- MORE THAN 20 YEARS OF EXPERIENCE IN THE CATALYST RECYCLING BUSINESS
- OWNER OF K2FCONSULT

CONSULTING FOR RECYCLING TECHNOLOGY AND THE CATALYTIC CONVERTER RECYCLING INDUSTRY



GÜNTER PAULI

- SINCE 1992 OWNER AND CEO OF STEINLEIN & KUNZE GMBH
- ENGINEER WITH MORE THAN 30 YEARS OF EXPERIENCE IN TECHNICAL EQUIPMENT



STEINLEIN & KUNZE GMBH

- MORE THAN 100 YEARS OF HISTORY IN BALL MILL BUILDING
- OWNED BY GÜNTER PAULI SINCE 1992
- LOCATED IN KOBLENZ, GERMANY
- BUILT MORE THAN 1000 BALL MILLS
- SINCE 1992 MORE THAN 100 BALL MILLS FOR THE PRECIOUS METALS INDUSTRY
- CONTINUOUS DEVELOPMENT OF TECHNOLOGY



STEINLEIN & KUNZE GMBH

- MR. STEINLEIN, THE FOUNDER OF THE COMPANY INVENTED THE „DROSS-SEPARATOR“ IN 1911
- HE CALLED IT „PROFIT-MILL“ AS NOW IT WAS POSSIBLE TO RECOVER 60-70 % METAL PARTICLES OUT OF THE DROSSES AND SLAGS.
- SINCE THAT, STEINLEIN SEPARATORS ARE USED WORLDWIDE FOR SCREENING OF METALS AND PRECIOUS METALS

**FOUNDRY DROSS HANDLING
METAL RECYCLING**



① Steinlein dross separator, size 4
② vibration tube
③ silo
④ haulage equipment
⑤ filling cone gate
⑥ deduster

Illustration shows full automatic metal recycling unit size No.4 (minimal performance: 0,5 m³/h)

Since 1911, the STEINLEIN DROSS SEPARATOR is internationally proven. We offer you a reliable, technically perfected and economic unit that is worldwide known for its *high duration*. Use our long experience in metal recycling from dross, metal ashes, metal scrapings, precious-metal wastes, refractory materials, electronic wastes etc.

Get convinced by a free test recycling. Send us about 16 litres of your average dross or wastes. You will get it back separated into metal and dust. Please tell us the monthly amount of your dross/wastes and we will make you an offer for a unit that fits the size of your plant.

**WE OFFER COMPLETE SERVICE:
UNIT PLANNING, CONSTRUCTION, ASSEMBLING**

STEINLEIN & KUNZE GMBH
5400 KOBLENZ · RÜBENACHER STR. 89 · TELEFAX 0261 - 251 89 · TEL 0261 / 250 74

Ashes 

STEINLEIN & KUNZE GMBH

- STEINLEIN & KUNZE GOT THE PATENT ON THE „SAND SEPARATOR“ FOR THE CASTING INDUSTRY IN 1958
- OLDEST KNOWN STILL RUNNING MILL WAS BUILT IN 1953
- MOST USED IN THE PM REFINING BUSINESS
- ABOUT 40 – 50 MILLS FOR CAT-RECYCLING WORLDWIDE
- MORE THAN 20 COMPLETE GRINDING AND SAMPLING PLANTS INSTALLED



GRINDING OF AUTOCAT CERAMICS IN THE PAST

- A LOT OF INDIVIDUAL STEPS
- STAFF INTENSIVE
- TIME-CONSUMING
- LIMITED BATCH-SIZES
- SETUP OF INDIVIDUAL UNITS NEEDS A LOT OF SPACE



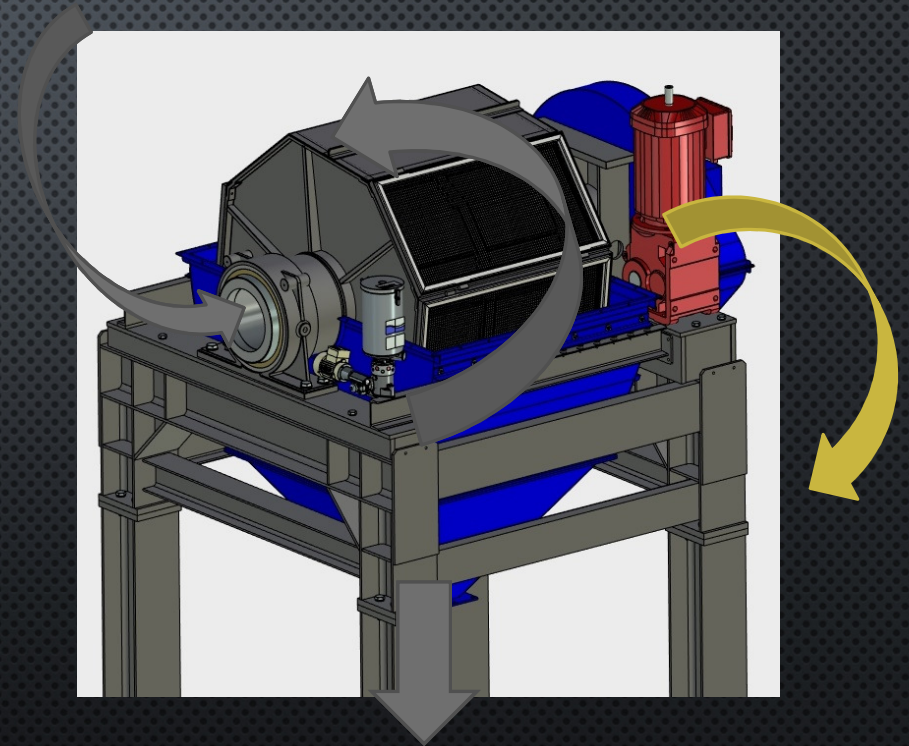
ADVANTAGES OF STEINLEIN & KUNZE EQUIPMENT

- COMBINATION OF PROCESS-STEPS
- TIME SAVING
- ONLY 1 OPERATOR NEEDED
- NEARLY COMPLETE FULL AUTOMATISATION POSSIBLE
- LOW MAINTENANCE
- LONG LASTING
- FLEXIBLE USAGE

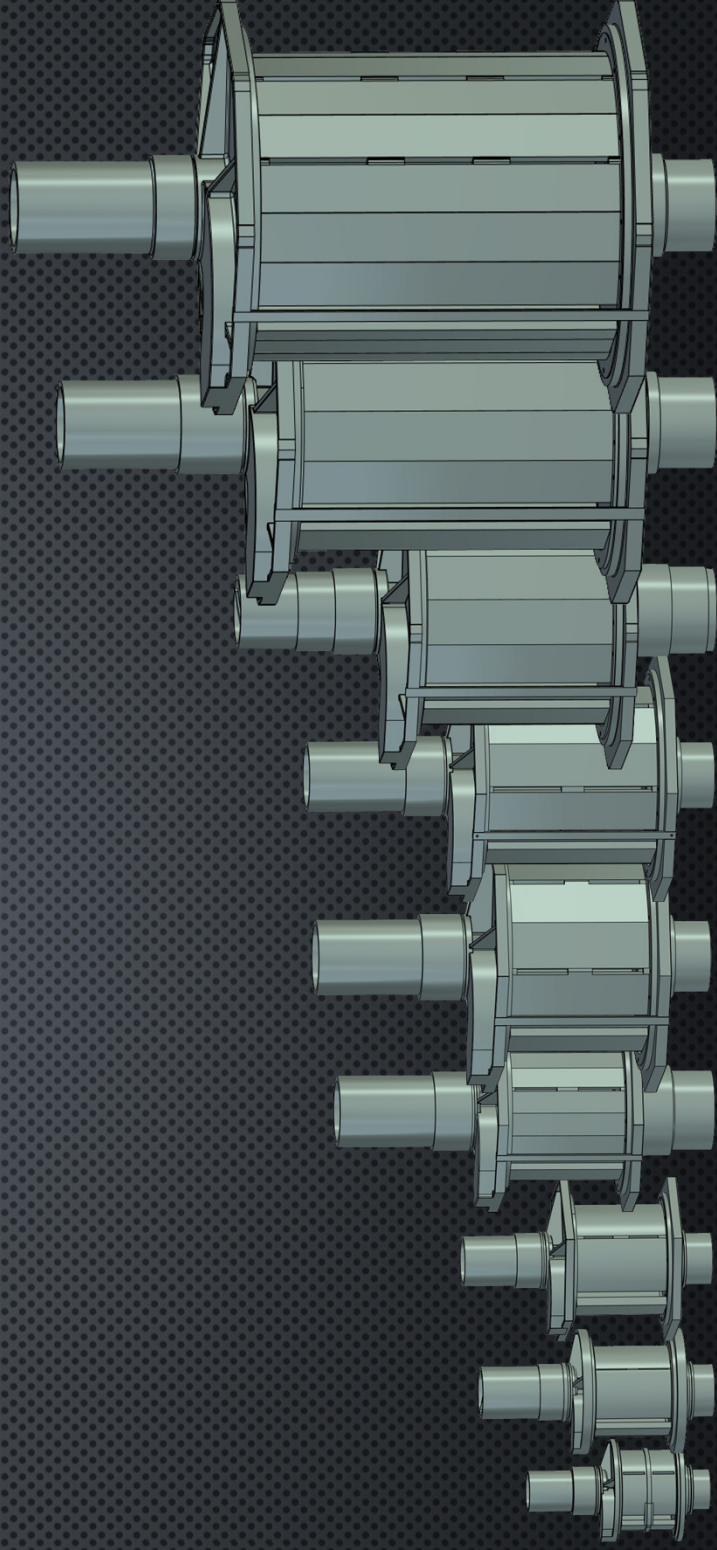
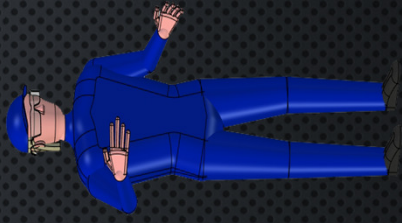


FUNCTIONAL PRINCIPLE

- BALL MILL WITH INTEGRATED SIEVES
- GRINDABLE MATERIAL REMAINS WITHIN THE MILL UNTIL IT FITS THROUGH THE INSTALLED SIEVES
- MULTIPLE SIEVING LAYS AND EASY EXCHANGABLE FINE SIEVES
- NON-GRINDABLE MATERIAL WILL BE DISCHARGED IN REVERSE MODE



DIFFERENT SIZES FOR DIFFERENT PURPOSES



BEST USED SIZES FOR AUTOCATS

- SEP 0A / 0 – FOR INDIVIDUAL SAMPLES AND SMALL AMOUNTS
- SEP 2 – FOR LOTSIZES 30 -500 KG
WITH OPTIONAL „DIRECT INTO MILL SHEARING“
THROUGHPUT UP TO 300 KG / H (1 MM / 18 MESH SIEVES)
- SEP 3 – FOR LOTSIZES 50 KG AND ABOVE
THROUGHPUT UP TO 450 KG / H (1 MM / 18 MESH SIEVES)
- SEP 4 – FOR LOTSIZES 70 KG AND ABOVE
THROUGHPUT UP TO 700 KG / H (1 MM / 18 MESH SIEVES)
- SEP 5 – FOR LOTSIZES 100 KG AND ABOVE
THROUGHPUT UP TO 1000 LB / H (1 MM / 18 MESH SIEVES)

SEPARATOR 0A

- SIZE 0A WITH OPTIONAL BLENDER



- SIZE 0A WITH PLATFORM AND SIMPLE SAMPLE DIVIDER



SEPARATOR 2

- FULLY AUTOMATED PLANT
- SIZE 2 SEPARATOR
- NOISE CONTROLLED FEEDING
- DRUM LIFT AND DISCHARGER
- AUTOSAMPLER
- BIG BAG STATION
- DUST COLLECTION AND RETURNING



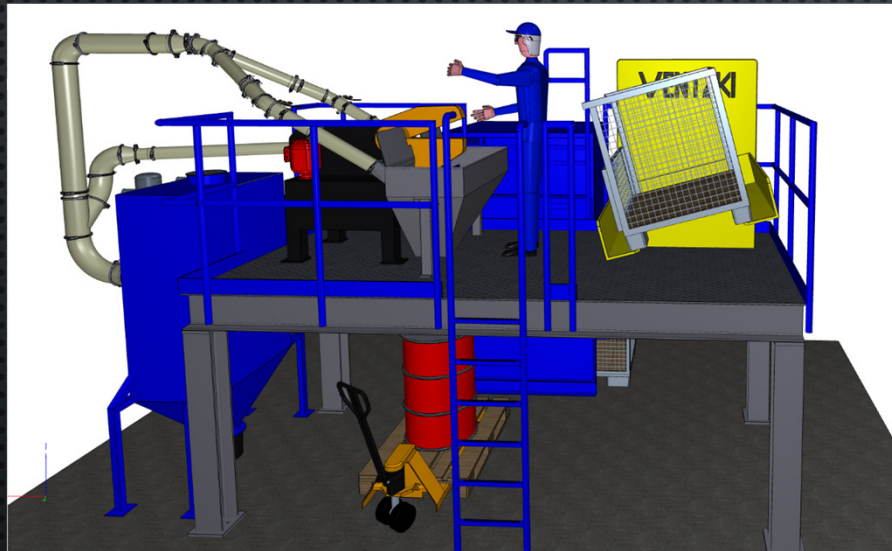
SEPARATOR 5

- FULLY AUTOMATED PLANT
- NOISE CANCELLED SIZE 5 SEPARATOR
- INTEGRATED 3000L NAUTA BLENDER
- NOISE CONTROLLED FEEDING
- DRUM LIFT AND CRANE FEEDING
- AUTOSAMPLER
- BIG BAG STATION
- DUST COLLECTION AND RETURNING



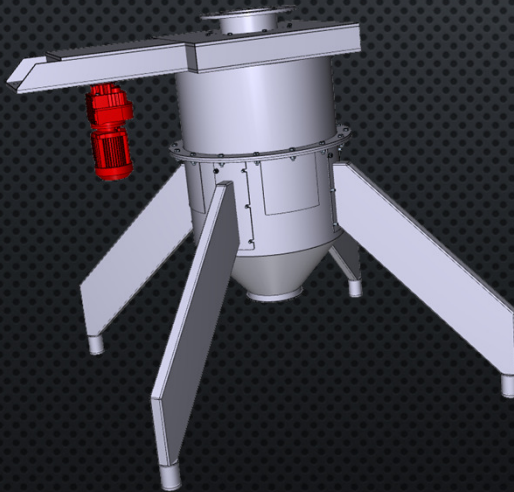
OTHER STUFF FROM STEINLEIN & KUNZE

- Stand alone Converter decanning station for Alligator shears



OTHER STUFF FROM STEINLEIN & KUNZE

- SK 200/4 Automatic Sample divider produces 2 Samples per Second
- With 120 Samples / Minute most accurate and reproducible results



THANK YOU FOR YOUR ATTENTION

Günter Pauli

info@steinlein-kunze.de

Frank Fassbender

info@k2fconsult.de