ACOUSTICS™
INDIA

COMPRESSOR NOISE CONTROL

Noise control solutions for Compressors with drive, Suction Silencer, Discharge Silencer,Blow-off Silencer,Acoustic Enclosure, Ventilation system inside enclosure and Acoustic treatment for intercoolers, aftercoolers and moisture separator.

Compressor Noise Control

Acoustics India Private Limited is an ISO 9001 certified full service solution driven engineering company with a manufacturing capability of noise control equipment since 1988. With a vast experience and a clientele across disciplines, our range of products encompasses Steam Vent Silencers, Acoustic enclosures and other noise control products.

Description

Blow-off Silencer : JSW,Bellary

Acoustics India provides you the most competent solution for compressor noise control. Our extensive experience helps us to recommend you the most viable compressor noise control solutions for the following areas:

- Acoustic Enclosure for compressor with drive.
- Suction Silencer in the suction line.
- Discharge Silencer in the discharge line.
- Blow-off Silencer in the bypass line.
- Ventilation system inside the enclosure to remove the heat dissipated from the compressor, motor, intercoolers, aftercoolers and the moisture separator.
- Acoustic treatment of openings for intercoolers, aftercoolers and

Acoustic Enclosure

Acoustic Enclosure for Turbo Blower

The Acoustic Enclosure comprises of modular structure frames made out of MS channel, angles and pre-fabricated high performance acoustic panels. The modular structural frame could be easily assembled since they are constructed as bolted structures. The construction is so designed to facilitate easy assembling and dismantling .The acoustic enclosure will also be provided with sound proof industrial sound reducing doors, so that, the routine check-up or minor maintenance could be carried out by the operator by getting into the acoustic enclosure through the sound reducing doors, as sufficient space inside the enclosure is provided around the compressor for an operator to move around on all sides. The acoustic enclosure is suitably illuminated and the ventilation arrangement with ventilation silencers and ventilation blowers will be provided to restrict the temperature raise within 7 C above the ambient temperature. The intercoolers and after coolers will be acoustically enclosed with suitable ventilation arrangements, so that, the temperature raise on the skin surface does not affect the performance of the equipment. The entire structure borne noise transmission path will be traced and acoustically treated to maintain the noise level within the desired limit.

Suction Silencer

Compressor Suction Silencer : Bhilai Steel Plant

Suction silencers can be rectangular or cylindrical in construction. The circular silencer is made of concentric annular acoustic cylinders enclosed in a robust steel casing with transition cone or dished end at both ends, with inlet and outlet nozzles. The air / gas enters the silencer and passes through the annular space between the concentric annular acoustic cylinders where the sound energy is absorbed. The straight flow path through annular acoustic cylinders ensures minimum pressure drop. Either steel, galvanized steel or stainless steel will be provided for internals based on the customer's

Compressor Noise Control

ELLIOTT EBARA - GGSR Bhatinda Project

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Discharge Silencer

A discharge silencer is similar in construction as that of a suction silencer. However, the silencer casing with inlet and outlet nozzles will be designed as a pressure vessel.

Additional features of discharge silencer include Design as per ASME SEC VIII Div 1 ,Radiography,PWHT

Blow-off Silencer

A blow-off silencer will normally be a vent silencer installed in the discharge bypass line of compressors. The internal construction will be similar to that of a suction silencer. However, in the case of a blow off silencer, the air / gas enters through the diffuser and passes through the straight air path between annular acoustic cylinders and escapes into the atmosphere. Normally, such vent silencers will be provided with a weather cowl.

Ventilation System

The fresh air is sucked through the intake silencers and travels around the compressor and motor to take away the heat dissipated from the compressor and motor and then, it escapes through the exhaust blowers, mounted on the roof of the enclosure with ventilation exhaust silencers. The

Ventilation system is normally designed to limit the temperature rise

Case Study

Noise Reduction of Compressor - BHILAI STEEL PLANT

AIPL designed a suitable noise control system to reduce the noise emanated from the compressor well within 85 dBA limit. The temperature rise inside the acoustic enclosure was to be maintained below 50 C.

The compressor package consists of a large multi-stage compressor, 9500 KW motor, after coolers, intercoolers and moisture separator.

The noise control scheme consisted of acoustic enclosure for the compressor, brick walled enclosure for the intercoolers and after coolers with sound proof industrial doors with a suitable ventilation system to remove the heat dissipated from the compressors, motors, after coolers, intercoolers and moisture separators.

The ventilation air sucked through the intake silencers takes away the heat dissipated by all the coolers and moves up through the floor grills and gets inside the compressor acoustic enclosure to take away the heat from the compressor and motor and escapes through the exhaust blowers mounted on the roof of the enclosure with ventilation exhaust

After installing the system, the noise level was found to be within 85 dBA around the enclosure. The temperature was measured inside the enclosure and found to be within 50 C.

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Quality

Quality bench marks are to the highest level playing field. Stringent processes that doubly ensure quality is maintained right from raw material sourcing to the finished product inspection prior to dispatch. On customer preferences, silencers are inspected by LRIS, DNV, BVIS, EIL, etc and are certified for quality. All our products perform par excellence. Our products are ensured to comply with the requirements of OSHA / ISO Standards.

Clientele

Steel & Power	Engineering	Chemical & Fertilizers	Oil / Petro Chemical
Tata Steel	EIL	FEDO	GAIL
IISCO	RIL BECHTEL	HFCL	KRL
SAIL	Andrew Yule & Co	CFCL	HPCL
Visag/Bokaro/Bhilai Steel	Linde/BOC India	SPIC	BPCL
Jindal/Durgapur Steel	L&T/L&T MHI	RCFL	BRPL
JSPL	UHDE/UHDE GMBH	MFL	MRPL
BHEL HYD/HWR/BPL	Technimont ICB	EID Parry	ONGC
NTPC	BHPV	GNFC	RIL
MSEB/KSEB/TNEB	SABIC	Indo-Gulf	IOCL
Korea Heavy Industries	KTI	IFFCO	ESSAR Oil
Alstom Projects	MECON	GFCL	Quippo Infrastructure
BSES	Indian Railways	GSFC	Adyard Abu Dhabi
Deutsche Babcock	Howden India	Ultra Tech Cements	PetroFac International
Thermax Babcock	Siemens	Heidelberg Cements	Southern Petrochemical
Mitsui Babcock	Atlas Copco	MCSC	Haldia Petrochemicals
IJT	Air Liquide	FLSmidth	Heurtey Petrochemicals
Torrent Power	Thyssen Krupp Industries	Jubilant Organosys	Numaligarh Refinery
ESSAR Steel	Praxair India Pvt Ltd	Ranbaxy Laboratories	
Mono Steel	Copes-Vulcan	Sudha Agro	
METSO Power	Jubail Chemicals	Shree Cements	
Belleli Energy	Ansaldo Caldaie Boilers	Saurashtra Chemicals	
Deutz	Tata Motors Limited		
Mazagon Dock	SPX Process Equipment		
Stewards & Llyods	Downer Energy Systems		
GIPCL	GALFAR Engineering/PDO		
Hindalco	TOPS Technologies / CTCI		
INOX AIR Products	ABB		
BGR Energy	Bateman Engineering		
Caterpillar	DRDL		
DF Power Systems	Punj Llyod		
TD Power Systems	Spirax Marshall		
	Samsung Engineering		

Acoustics India Private Limited

377, Rajaram Salai, K.K.Nagar, Tiruchirappalli - 620 021. Tamil Nadu, India.
Telephone :00-91-431-4044900(30 lines) Fax:00-91-431-2456148
Mail: marketing@acousticsind.com URL: www.acousticsind.com