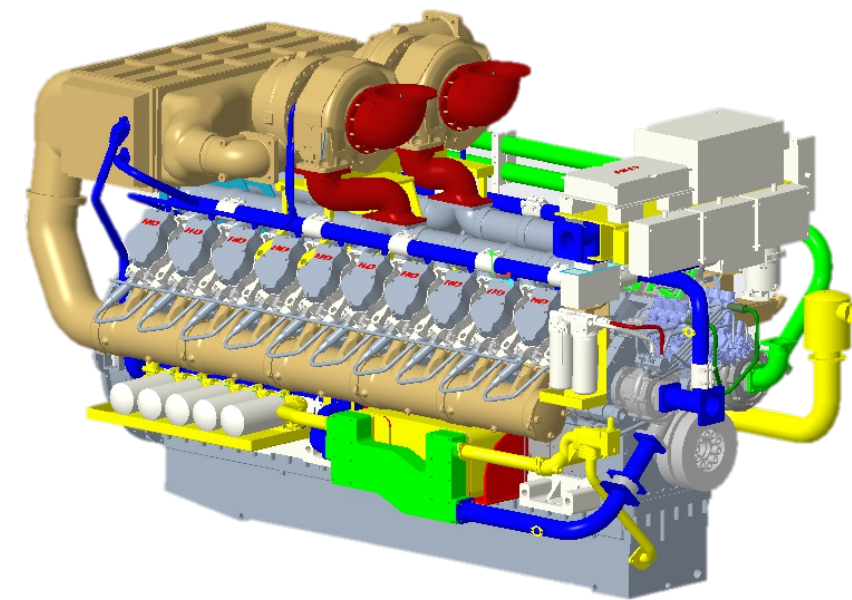


CHD622V20BCR柴油机适应性改进与应用
Adaptability Improvement and Application of CHD622V20BCR Diesel Engine

2021年，河柴重工结合高海拔混合动力机车使用环境，在CHD622V20BCR柴油机基础上开展适应性研究工作，成功研制出CHD622V20BCRLJ柴油机，单机功率达3300kW，裸机排放指标满足EU III A标准，加装后处理系统后排放指标可满足EU III B标准，满足机车运行高海拔（≤2500m）、大温差（-40℃~80℃）、多档位频繁切换、路况复杂多变等使用需求。

In 2021, HND carried out adaptability improvement test and verification for CHD622V20BCR diesel engine according to the high altitude operation ambient for locomotives, successfully developed CHD622V20BCRLJ diesel engine, rated power reaches 3300kW, emission index meets Standard EU III A, moreover it is enable to meet Standard EU III B by installation of SCR system. Through adaptability improvement test and verification, the engine is able to steady operation under condition of high altitude (≤2500m), large temperature difference (-40℃~80℃), multi-gear frequent switch over, complex and varied road conditions on locomotive.



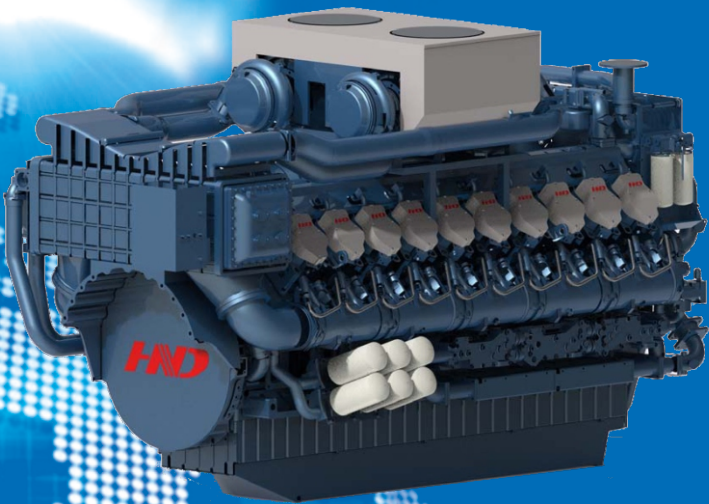
河柴重工官方微信二维码

CSSC 河南柴油机重工有限责任公司
HENAN DIESEL ENGINE INDUSTRY CO., LTD

地址：中国·河南省洛阳市中州西路173号
邮编：471039
公司网站：<http://www.hnd.com.cn>
船机销售业务：0379-64076289
陆机销售业务：0379-64076331
出口销售业务：0379-64076120
备件销售业务：0379-64076307
售后服务业务：0379-64076739
全国客服热线：400-0888-407
工作日：8:00-12:00 14:00-18:00

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自主品牌柴油机CHD622V20BCR产品介绍
Introduction of Independent Brand Diesel Engine CHD622V20BCR



产品介绍Introduction of Product

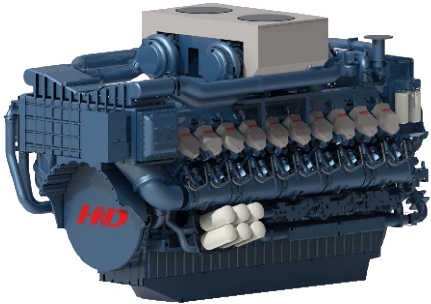
自主品牌柴油机
CHD622V20BCR
Independent Brand Diesel Engine
CHD622V20BCR

- 体积小
Compact Structure

重量轻
Light Weight

寿命长
Durable Operation

排放低
Low Emission



概述及特点

Description and Feature:

CHD622V20BCR柴油机是在原工信部“自主品牌高速大功率柴油机自主研制”机型基础上新研发的高强化柴油机，柴油机标定功率为4000kW / 1800r / min，最大功率达4400 kW。柴油机研制突破了多增压器相继增压优化匹配及控制技术、高密度柴油机强化设计技术、大推力止推轴承强化设计技术、柴油机低辐射水冷护罩及高温部件一体化隔热技术、高强化柴油机高温密封紧固设计技术、基于进气冷却的高温燃气阀密封等多项关键技术，降低了高温部件表面热辐射，优化了柴油机全工况的性能及整机的振动，提高了柴油机全寿命周期运行可靠性。柴油机排放指标满足 GB / T15097-2016 国二（C2）和IMO Tier II，带后处理系统可满足IMO Tier III。

CHD622V20BCR diesel engine is a high-strength diesel engine developed on the basis of CHD622V20CR diesel engine, rated power of CHD622V20BCR diesel engine is increased to 4000kW/1800rpm and max. power is reaching to 4400kW. Research and development of CHD622V20BCR diesel engine is utilized with sequential turbo charging technology on multi-turbochargers, high power density technology enhanced of engine designing, strong thrust bearing enhanced of designing, entire heat insulation technology for high temperature components by water cooled shield of low heat emission covering on exhaust manifolds, high temperature sealing and fastening design technology, high temperature gas valve sealing with air intake cooling technology etc. many key technology, decreased heat emission from surface of high temperature components, optimized the performance on full running condition and vibration of whole engine, increased reliability of full life operation cycle of engine. Emission index of CHD622V20BCR diesel engine is able to meet emission requirement C2 (China II) of Standard GB/T15097-2016 and IMO Tier II, moreover enable to meet IMO Tier III by installation of SCR system.

CHD622V20BCR 柴油机具有强化程度高、功率密度大、低排放、智能化程度高、结构紧凑、体积小、重量轻、可靠性高、操作维修方便、外观布置合理、美观大方等特点，是国内具有自主知识产权输出功率最大的高速柴油机之一。产品采用高压共轨技术、相继增压技术、智能控制系统等，柴油机综合性能指标达到世界先进水平，广泛应用于船舶主机、发电、机车、工程机械等领域。

CHD622V20BCR diesel engine has the characteristics of enhanced configuration, high power density, low emissions, full intelligence, compact structure, small size, light weight, high reliability, easy operation and maintenance, reasonable layout, gorgeous appearance. It is one of the high-speed diesel engines with the largest output power and independent intellectual property right in China. This engine is utilized with high pressure common rail and sequential turbo charging technology, intelligent control system and so on. The general performance index is reaching the most advanced level in the world. It can be widely used as marine main engine, power generation, locomotive, engineering machinery, etc.

CHD622V20BCR柴油机主要参数

Main Parameters of CHD622V20BCR Diesel Engine

型号 Model		CHD622V20BCR
标定功率 Rated Power	kW	4000
标定转速 Rated Speed	r/min	1800
缸径/行程 Bore/Stroke	mm	170/215
气缸数 Cylinder No.		20
排量 Displacement	dm ³	97.6
排放等级 Emission Level		C2 (China II) IMO Tier II
净重 Net Weight	kg	10500

CHD622V20BCR柴油机主要特点

Main Features of CHD622V20BCR Diesel Engine

高压共轨技术：高压共轨系统可以将恒定压力燃油分送到每个喷油器，借助喷油器上的高速电磁开关阀的开启与闭合，精确控制供油时刻和循环供油量，从而保证柴油机动力性、经济性、排放性三者之间良好平衡。

相继增压技术：采用相继增压技术，柴油机在高低转速分别控制投入工作增压器的数量，实现全工况具有较高的进气流量，提升热效率、降低燃油消耗率，提高排放等级，使柴油机能够提供更广的扭矩输出。

低排放：柴油机满足GB/T15097-2016 CCS二阶段排放和IMO TIER II 排放标准。

高功率密度：柴油机结构紧凑，体积小，强化程度高。

High pressure common rail technology: high pressure common rail system supplies fuel to each injector with constant pressure, actualize precisely control fuel supply timing and circulating fuel quantity by means of open and close high speed solenoid valve on fuel injector to ensure perfect balance among power, economy and emmision for engine.

Sequential turbocharging technology: by using the sequential turbocharging technology, actualizes respectively control of running turbocharger number so that achieve sufficient air intake flow in full working condition, increase thermal efficiency, decrease fuel consumption, improve emission, achieve wider range of torque output of engine.

Low emission: diesel engine meets GB/T15097-2016 C2 (China II) and IMO TIER II emission standards.

High power density: compact structure, small size, enhanced configuration.