

## CERTIFICATE OF QUALIFICATION

Document No: COQ10443203

This is to certify:

That

KSB SE & Co. KGaA Bahnhofplatz 1, 91257 Pegnitz, Germany

is a qualified manufacturer of:

## Additive Manufacturing of metallic parts

in accordance with DNV-ST-B203 and DNV-SE-0568 Module B

and the following particulars:

AM Facility qualified	KSB SE & Co. KGaA Standort Pegnitz, Bahnhofplatz 1, 91257 Pegnitz, Germany
AM Technologies qualified	Laser beam powder bed fusion (PBF-LB) to AMC 3 level
BPQs qualified	Additive Manufactured B462 NORIBEAM ALLOY 625+U (UNS N06625) for PBF-LB
Parts qualified	Impeller, AMC 3 level as per manufacturer's own specification, PBF-LB and UNS N06625 (AM) material, see page 2 for details.

## Reference documents:

Facility description: KSB\_Facility doc\_PI2131302\_rev00

Audit report: 10443203A Rev. 01 & Audit comments to KSB June 2023\_rev01\_SB

BPQ records: KSB\_BPQ\_PI2131303\_rev00

PQ records: FB03\_PQR\_PI2103765\_2023-001 & 002

Issued at Oslo, Norway on 2023-12-19

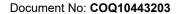
This Certificate is valid until 2028-12-18.

Technical Authority: Sastry Yagnanna Kandukuri for DNV

Sondre Løken Head of Section - Materials Advisory

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## Qualified part details

Item	Description
Part(s) name	Impeller NC2094214 001 MCA 01,
	Impeller UG2087627 001 ZMK 01
Part description	Impeller diameter up to 425mm
Material type	B462 NORIBEAM ALLOY 625+U
AM technology	PBF-LB
Delivery condition/ HT	As built
PPS Number	FB01_PPS_PI2103765_2023-001 - ***2023-015
AMC category	AMC 3
Unique ID of digital file	K230402_IN625+U.openjz
	K230808_IN625+U.openjz
Unique Id of parameter file	IN625_040_080_HiProM404
Unique ID of AM machine	SI04014057
Reference BPQ number	KSB_BPQ_PI2131303_rev00
PQR Number	FB03_PQR_PI2103765_2023-001_Laufrad
	FB03_PQR_PI2103765_2023-002_Sauglaufrad

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