Profile of rolling bearing damage (Bearing: KA30)

Category			Unit	Specification/Value
General info		Bearing Type	-	deep groove ball bearing
		Bearing designation (dimension series, bore code)	-	6203
		Suffix	-	-
Manufacturer specific information	Geometry	Diameter of inner raceway	mm	n/a
		Diameter of outer raceway	mm	n/a
		Pitch circle diameter	mm	29.05
		Number of rolling elements	pc.	8
		Rolling element diameter	mm	6.75
		Length of rolling element	mm	6.75
		Nominal pressure angle	°	0
	Parameters	Static load rating	N	n/a
		Dynamic load rating	N	n/a
		Speed limit	min^{-1}	n/a
		Manufacturer	-	MTK
Application specific information	Identification	Bearing code	-	KA30
		Sample number	-	15-01
	Place of operation	Installation site	-	01
		Installation type (system type)	-	bearing damage test bench (KAt)
		Operator	-	Chair of design and Drive Technology, Paderborn
	Operating conditions	Number of load cycles	cycles	3746800
		Lifetime	h:min	21:01
		Load	N	-
		Dynamic equivalent load	N	3800
		Rotational speed	min^{-1}	2900
		Load direction	°	0
		Comment	-	n/a

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		Number of damages		1		
Category				**Damage 1**	**Damage 2**	**Damage 3**
Damage	Type of Damage	Mode		plastic deformation		
		Sub-mode		deformation by foreign objects		
		Symptom		particle-caused indentations		
	Damage location	Component		OR		
		Position of damage		raceway		
		Damage combination		R		
		Arrangement of the respective damages		random		
	Geometry	Length	mm	<1		
		Extent of damage		1		
		Width	mm	<1		
		Depth	mm	n/a		
		Characteristic of damage		distributed		
	Damage occurrence	Damage method		lifetime test		
		Cause of damage (category)		operating conditions and lubricant		
		Cause of damage (detailed)		overload, wrong viscosity, contamination		

Legend

OR: outer ring
IR: inner ring
S: single damage
R: repetitive damage
M: multiple damage

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