Profile of rolling bearing damage (Bearing: KI14)

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	-	KI14
		Sample number	-	11-02
	Place of operation	Installation site	-	02
		Installation type (system type)	-	bearing damage test bench (KAt)
		Operator	-	Chair of design and Drive Technology, Paderborn
	Operating conditions	Number of load cycles	cycles	3683000
		Lifetime	h:min	21:01
		Load	N	3800
		Dynamic equivalent load	N	
		Rotational speed	min^{-1}	2900
		Load direction	°	0
		Comment	-	n/a

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		Number of damages	2		
Category			**Damage 1**	**Damage 2**	**Damage 3**
Damage	Type of Damage	Mode	fatigue	plastic deformation	
		Sub-mode	n/a	deformation by foreign objects	
		Symptom	Pitting	particle-caused indentations	
	Damage location	Component	IR	OR	
		Position of damage	raceway	raceway	
		Damage combination	M	M	
		Arrangement of the respective damages	without repetitive damage	random	
	Geometry	Length mm	1	1	
		Extent of damage	1	n/a	
		Width mm	1	1	
		Depth mm	n/a	n/a	
		Characteristic of damage	single point	single point	
	Damage occurrence	Damage method	lifetime test	lifetime test	
		Cause of damage (category)	operating conditions and lubricant	operating conditions and lubricant	
		Cause of damage (detailed)	overload, wrong viscosity, contamination	overload, wrong viscosity, contamination	

Legend

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

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