QUESTINOAIRE PLASTIC GEARS

Date: _____

1. Gerneral data:

Company: _____

Adress: _____

Post code: _____ City: _____ Country: _____

Contact: _____ Department: _____

Phone: _____ E-Mail: _____

2. Application data:

Description of the application: _____

Present material: _____

Demand/year: _____ Actual Price: _____

Why do you want to use plastic: _____

_____

Which disadvantages should be discontinued:

_____

Grade of function impairing: _____

Which advantages should be reached: _____

3. Gear housing:

Type: ☐ open ☐ partly open ☐ closed

Gear surface: _____

Material: _____

Drive unit dimensions: L_{max} = _____ B_{max} = _____ H_{max} = _____

Possibly representation number: _____

4. Interconnection data:

↓ obligatory demand ↓ wish-demand

☐ spur toothed

☐ helical toothed, angle: _____ °

☐ left hand gradient

☐ right hand gradient

❍❍ gear cutting quality: ☐ according to DIN 3961 ☐ or: _____

pressure angle: _____ Toleranzreihe: _____

information about the reference profile: _____

pressure angle: _____ ° top height: _____ mm

root height: _____ mm root radius/tooth fillet: _____ mm

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5. Dimensions of the gear:

Which gear shell be substituted by plastic?

❍❍ Gear 1 ☐
❍❍ Gear 2 ☐

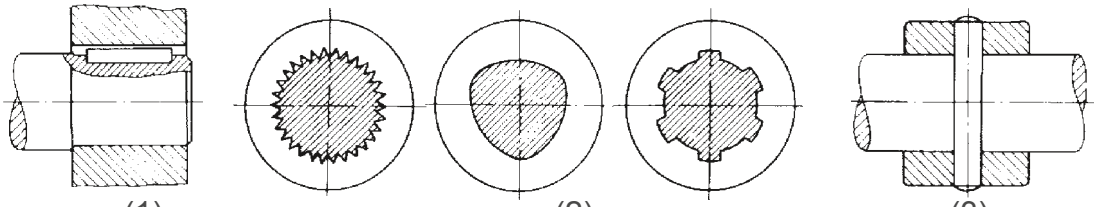
Pressure zone at the pitch circle: _____ °

Moduls: _____ mm

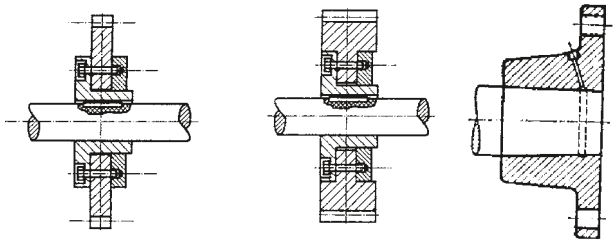
	Material:	Gear 1: _____		Gear 2: _____	HRC
	Elastic modulus:	Gear 1: _____	N/mm²	Gear 2: _____	µm
	Surface hardness:	Gear 1: _____	mm	Gear 2: _____	mm
	Roughness height Ra:	Gear 1: _____	µm	Gear 2: _____	mm
❍❍	Pitch circle diameter:	Gear 1: _____	mm	Gear 2: _____	mm
❍❍	Top circle diameter:	Gear 1: _____	mm	Gear 2: _____	mm
	Ground circle diameter:	Gear 1: _____	mm	Gear 2: _____	mm
	Profile displacement:	Gear 1: _____	mm	Gear 2: _____	mm
	Number of teeth:	Gear 1: _____		Gear 2: _____	
❍❍	Tooth width:	Gear 1: _____	mm	Gear 2: _____	mm
❍❍	max. permissible flight land clearance:	Gear 1: _____	mm	Gear 2: _____	

6. Attachment of the gear:

Please mark with a cross:



(1) (2) (3)



(4) (5)

☐ By form-fit
☐ By _____ pieces dowel pins (1)
☐ By a transverse pin (3)
☐ By Tapered seat with/without tapered bush (5)
☐ By a transverse compression bandage
☐ _____

☐ By force closure
☐ By a profile shaft (2)
☐ By a flange (4)
☐ By a groove wedge
☐ By a wave mother

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7. Surrounding medium:

☐☐ ☐ Outside use ☐ Inside use

☐☐ ☐ Medium _____ _____ °C

☐☐ ☐ Air with a temperature of: _____ °C

and a relative humidity of: _____ %

☐☐ ☐ Chemicals

Name: _____

Concentration: _____ % pH Value: _____ Temperature: ____ °C

7.1 Medium between connecting parts:

☐☐ ☐ No lubrication - dry operation -

☐☐ ☐ Oil lubrication

☐☐ ☐ Grease lubrication ☐ Grease lubrication unique

☐☐ ☐ Water lubrication:

available water volume flow rate: _____ Kg/s

existing water flow temperature: _____ °C

maximum water outlet temperature: _____ °C

☐☐ ☐ other: _____

8. electrical influences:

demanded electrical influences:

☐☐ ☐ Penetration resistance _____ kV/mm

☐☐ ☐ Dielectric constant _____

☐☐ ☐ Loss factor _____

☐☐ ☐ Resistivity _____ Ohm/cm

☐☐ ☐ Surface resistance _____ Ohm

9. Load on the driving wheel:

9.1 Continous load:

☐☐ power _____ kW

☐☐ screw speed _____ min^{-1}

Permanence of the continous load: _____

How often per time unit does the continous load occur: _____

9.2 maximum load:

_____

☐☐ Specific resistance _____ kW

☐☐ Surface resistivity _____ min^{-1}

Exposure time of the continuous load: _____

How often per time unit does the continous load occur: _____

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Type of drive machine: _____ Impact factor: _____
Type of powered machine: _____ Impact factor: _____
Ambient temperature: _____ °C
Turn on time: _____ %

10. Movement:

☐ no movement further on at 11
☐ no rotation further on at 10.2

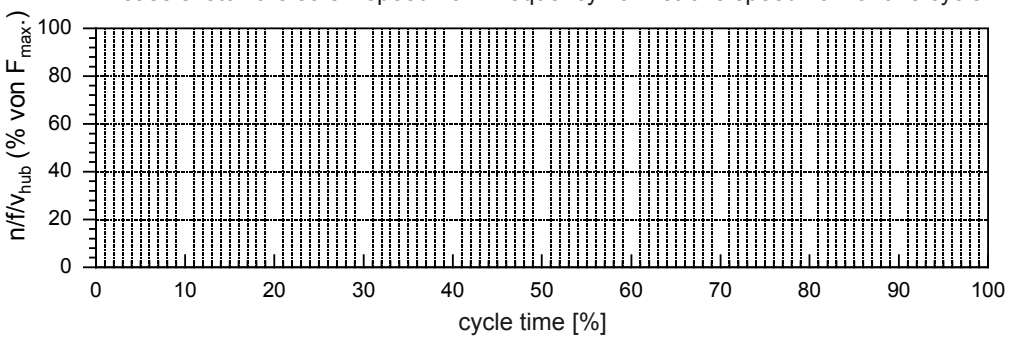
10.1 Rotation

Continous screw speed: _____ maximum screw speed: _____
Loading time with continous screw speed: _____ ms/ s / min / h / days / years
Loading time with max. screw speed: _____ ms/ s / min / h / days / years
Permanence of one load cycle: _____
Number of load cycles per time unit: _____
How long are the breaks between the load cycles: _____

☐ no oscillation further on at 11

10.2 Oscilation: Tilting angle: _____ °
Continous frequency: _____ Hz maximum frequency: _____ Hz
Loading time with continous frequency: _____ ms/ s / min / h / days / years
Loading time with maximum frequency: _____ ms/ s / min / h / days / years
Permanence of one load cycle: _____
How long are the breaks between the load cycles: _____

Please sketch the screw speed flow/ frequency flow/ stroke speed flow of one cycle



11. Ambient temperature:

Permanent temperature: _____ °C
max. temperature: _____ °C
How often per time unit does the maximum temperature occur: _____
Which medium transfers the temperature: _____

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Which movement and load occurs simultaneously with the heat exposure:

Radial load:

- ☐ none
- ☐ permanent as at 9.1
- ☐ maximum as at 9.1
- ☐ other: _____ N

Axial load:

- ☐ none
- ☐ permanent as at 9.2
- ☐ maximum as at 9.2
- ☐ other: _____ N

Movement:

- ☐ Rotation
  - ☐ none
  - ☐ permanent as at 10.1
  - ☐ maximum as at 10.1
  - ☐ other: _____
- ☐ Oscillation
  - ☐ none
  - ☐ permanent as at 10.2
  - ☐ maximum as at 10.2
  - ☐ other: _____

12. Working life:

- ☐ wished working life: _____ h
- ☐ permissible clearance increase

maximum radial clearance after _____ hours of operation _____ mm

maximum axial clearance after _____ hours of operation _____ mm

13. Miscellaneous:

Special material wishes: _____

Additional conditions to be served: _____

The more information you give us by this questionaire, the more precise solution we can work out for your application

- Please add a representation or a sketck of your application -

☐ AGM: ☐ KM: ☐ KO:

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