

TENDER DOSSIER EXPLANATION no. 2

Contracting Authority:

BENET AUTOMOTIVE s.r.o., ID no.: 26196891

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For all communication, please write to all 3 contacts at once.

Name of the public procurement contract: Supply of production line for producing battery covers with SMC technology 2

The Contracting Authority hereby provides, in accordance with point 15 of the Tender Dossier, upon request from the contractors dated 23th of July 2020 and 29th of July 2020, explanations of the Tender Dossier related to the above mentioned public procurement contract.

Questions from 23th of July 2020

Question no. 1

General

Preference in Robot Brand? KUKA, FANUC, ABB?

Answer no. 1

The brand of the robot is at the discretion of the supplier.

Question no. 2

General

What is a rework Part? Should it be considered just loading manually into the milling machine?

INVESTICE DO VAŠÍ BUDOUCNOSTI

Answer no. 2

Reworked parts to be loaded manually to CNC milling station and to the Buffer station.

Question no. 3

General

Will these reworks stop automatic production?

Answer no. 3

Yes.

Question no. 4

General

Who will provide stencils for the required processes?

Answer no. 4

Line supplier, it is a part of delivery.

Question no. 5

4.1 Colling

Is there any cooling gradient not allowed? If we cool down the part too fast, is there any risk of appearing non desired cracks?

Answer no. 5

It is not defined yet, the EMC 210 sec/pc should be adequate time.

Question no. 6

4.1 Colling

Which are the critical points to hold the part from?

Answer no. 6

The part has to be fixed based on specification to stabilize the cover shape – flatness of the outer contour has to be secured – tolerances according the assembly drawing.

Question no. 7

5.1 Bonding

Gluing of the 80% of the area, but where do we have to apply the glue, which are the critical areas?

Answer no. 7

Supplier has to count with proportional distribution of glue to all contours of CMS cover.

Question no. 8

5.1 Bonding

Do we have to apply the hotmelt in all the contour of the part or is it allowed to have a gap of approximately 5mm?

Answer no. 8

The acceptable gaps are not defined yet, thus all the contour.

Question no. 9

5.1 Bonding

If two robots are working in a normal cycle, when one is working because the other is broken, applying time will be double.

Answer no. 9

Likely yes.

Question no. 10

5.1 Bonding

Tandem design of Drums: Do you mean to have two drums? One working and the other ready to start working when the other is empty? Then the empty is replaced for a filled one?

Answer no. 10

Yes.

Question no. 11

5.1 Bonding

INVESTICE DO VAŠÍ BUDOUCNOSTI

3/16

How are you considering to position the rolling paper, automatically every cycle? Or does it have to be once per Shift manually, done by operator? Which type of paper are you expecting?

Answer no. 11

Automatic feeding paper type based on supplier decision.

Question no. 12

5.1 Bonding

Aluminum preforms: How are they fed in the carts? Is there any separation between the Alu parts? Otherwise they can stick one to the other as they have a big drawing and there can appear a kind of vacuum effect.

Answer no. 12

Separation foil or other material is not defined. Based on transport test results the Alu foils were normally unloaded piece by piece.

Question no. 13

5.1 Bonding

Aluminum, in the bonding press, is upside down regarding the produced part position in the 3000Tn press. So, there should be a turning station in between cooling and bonding.

Answer no. 13

The Alu foils will be delivered in the requested orientation, therefore the turning station is not requested.

Question no. 14

6.1 Label Sticking

Is it label stiching? Or label sticking?

Answer no. 14

The correct wording is label sticking.



Question no. 15

6.1 Label Sticking

Have you tried if the label sticks well in the embossed aluminum?

Answer no. 15

Not yet, but the label area at Alu foil has to be flattened.

Question no. 16

6.1 Label Sticking

What is the warning label?

Answer no. 16

Warning message label will be finally applied by BMW at their line – this label assembly is not required as a part of delivery.

Question no. 17

6.1 Label Sticking

Do you have in mind a vertical system like showed at attached picture?

Answer no. 17

Yes, a vertical system is possible.

Question no. 18

6.1 Label Sticking

Which is the size of the labels?

Answer no. 18

Not defined yet, the max. shape is visible from the assembly drawing.

Question no. 19

6.1 Label Sticking

Should the system include a label reader?

Answer no. 19

Yes.

Question no. 20

8.1 Cleaning Station

Have you made trials to see which is the most suitable process, Ionized air or CO2?

Answer no. 20

No.

Question no. 21

8.1 Cleaning Station

How will you measure the amount of particles in the surface?

Answer no. 21

Acc. QV11111 (Annex No. 9 to the TD - BMW quality standards).

Question no. 22

10.1 MICA gluing

How is the MICA material looking like?

Answer no. 22

Rigid foil like "plexi" glass.

Question no. 23

10.1 MICA gluing

How are the 11 parts coming to the line? One by one in the mentioned rotation table? Each one in a defined position? Or more than one same shape is stacked in the same position (kind of buffer)?

Answer no. 23

Operator will add all 9 parts into stencil and send it to the robot manipulation side. Consider all 9 different mica parts in separate packaging.

Question no. 24

10.1 MICA gluing

How is the SMC part loaded to the fixture? Upwards or upside down?

Answer no. 24

See process flow in specification with visualization of SMC part orientation.

Question no. 25

10.1 MICA gluing

Which are the pre-defined positions for gluing?

Answer no. 25

Optimally to cover all Mica shape.

Question no. 26

10.1 MICA gluing

What's the quantity of adhesive to be applied in pre-defined positions?

Answer no. 26

Amount approx.. like on Alu foil.

Question no. 27

10.1 MICA gluing

What is the Hotmelt Reference?

Answer no. 27

According the assembly drawing.

Question no. 28

10.1 MICA gluing

Is it possible to handle MICA with vacuum cups without breaking or deformation? Or what's the optimal handling equipment?

Answer no. 28

Vacuum cups should be optimal for Mica parts handling.

Question no. 29

10.1 MICA gluing

DMC code must be check Automatically?

Answer no. 29

Yes.

Question no. 30

10.1 MICA gluing

Plasma as Option, where should be applied? I guess in the defined positions, not in the whole part, is it?

Answer no. 30

Yes in defined positions for Mica parts gluing.

Question no. 31

11.1 Venting Device + Foam pad Assembly

What is the working path measurement?

Answer no. 31

Screwdriver stroke from start to final torque/angle reaching.

Question no. 32

11.1 Venting Device + Foam pad Assembly

Is it the path that the screwdriver is doing?

Answer no. 32

Yes.

Question no. 33

11.1 Venting Device + Foam pad Assembly

INVESTICE DO VAŠÍ BUDOUCNOSTI

8/16



Counting of Tightened screws: does it have to be an automatic counter, or the operator has to enter a value in one screen?

Answer no. 33

Automatical counter.

Question no. 34

11.1 Venting Device + Foam pad Assembly

How are the foams assembled? Do they have a kind of glue already applied?

Answer no. 34

Yes.

Question no. 35

11.1 Venting Device + Foam pad Assembly

This is something to do by the operator?

Answer no. 35

Yes.

Question no. 36

12.1 Foam pad Sticking

Who will provide the stencil?

Answer no. 36

Line supplier.

Question no. 37

12.1 Foam pad Sticking

What does it mean to detect automatically the different types of foams?

Answer no. 37

Check of presence, orientation, shape by camera.

Question no. 38

12.1 Foam pad Sticking

Different in shape, material, colour,...?

Answer no. 38

Possible shape differences.

Question no. 39

14.1 Packaging

4 minimum positions, 3 for containers and 1 for the cover of 1 container, is this correct?

Answer no. 39

Yes. And furthermore position for scrap parts, see in specification.

Question no. 40

14.1 Packaging

Scrap Part? Why a scrap part is appearing at the end of the line? Why not rejecting at the beginning when part is not ok at a certain station?

Answer no. 40

Scrap part can appear here for example as result of measurement station or not readable customer label.

Question no. 41

14.1 Packaging

How are the containers moving when they are full?

Answer no. 41

Based on line supplier feeding concept.

Question no. 42

14.1 Packaging

Who is supplying the container?

Answer no. 42

Customer BMW.

Question no. 43

14.1 Packaging

Is the container ready for transporting on conveyor rolls? Even full of parts?

Answer no. 43

Yes.

Question no. 44

14.1 Packaging

How are going to be activated this 6 clamping-separating points?

Answer no. 44

The first loaded part will activate clamps for the second part mechanically during loading.

Question no. 45

15.1 Measurement Device

Which are the key points to check?

Answer no. 45

All measured point are visible at assembly drawing.

Questions from 29th of July 2020

Question no. 46

You will accept reference contracts worth less than EUR 1,500,000 without VAT?

Answer no. 46

We cannot accept reference contracts of less than EUR 1,500,000 without VAT.

Question no. 47

Parts

Can we have part models and dimension drawings?

Answer no. 47

On the contracting authority 's profile is Annex No. 6 to the TD – NDA which you must sign for us and we will provide you with a detailed drawing of the battery cover.

Question no. 48

Parts

Are samples available?

Answer no. 48

They are not available.

Question no. 49

Parts

To process the price offer for the production of battery covers using SMC 2 technology, we would need at least the basic dimensions of the battery cover with regard to the size of the grippers, jigs and the size of the entire line.

Answer no. 49

See Answer No. 47.

Question no. 50

Parts

I would also like to ask you to specify the material of the part due to the specification of CNC machining.

Answer no. 50

Material of the cover is

a) SMC for body Material designation WS 07040;Content of Fiberglass min. 25% (ISO 1172);Flame Resistance: V0 (UL-94);HC – Emission : max. 3mg HC/Kg (GS97014);Young's

Modul: min 8500 MPa (EN ISO 527-4);Tensile Strength: min. 65 MPa (EN ISO 527-4) ;Free of Prohibited Materials (GS93008)

b) Alu – Foil Bonding 80° Peeling Strength (According to DIN 53357);Test Plaques size 200*50mm ;20N/50mm

Question no. 51

Cooling jig

Does the jig have to fully support the profile of the mould, or as in the photo only support the sealing flange?

Answer no. 51

There should be fully support and jig should be included in the price.

Question no. 52

Glue

How long does it currently take to spray the surface with glue?

Answer no. 52

It should be manageable in 210 s whole operation - assuming two nozzles on one arm.

Question no. 53

Glue

What is the maximum time after the first part of the glue is applied before the part has to be joined to the foil ?

Answer no. 53

Treating time of glue is 5 min.

Question no. 54

Foil

How robust are the foils (0.2mm thick) for moving around

Answer no. 54

Sufficient for automatic process need special vacuum griper.

INVESTICE DO VAŠÍ BUDOUCNOSTI

Question no. 55

Glue press

What is the press force?

Answer no. 55

Sufficient strength to meet the adhesion of aluminum foil to SMC according to technical specifications.

Question no. 56

Glue press

What is the minimum time to hold the part under pressure?

Answer no. 56

Max 60 sec.

Question no. 57

CNC trimming

Will the drawings have machining tolerance on so we can see the accuracy required?

Answer no. 57

Yes.

Question no. 58

Cleaning

Is there any information on the current process of cleaning?

Answer no. 58

Proposed is ionized air or CO2 should met customer norm QV11111 (Annex No. 9 to the TD - BMW quality standards), final solution is on vender.

Question no. 59

Cleaning

Is it cleaning of contamination or is there a de static process?

INVESTICE DO VAŠÍ BUDOUCNOSTI

Answer no. 59

Should met norm QV11111 (Annex No. 9 to the TD - BMW quality standards)

Question no. 60

Mica glue

Is it the same glue material as the above glue press?

Answer no. 60

Yes.

Question no. 61

Foam pads x5

Can these be applied during the venting device assembly?

Answer no. 61

Yes, but it should be in 210 sec, this is manual operation.

Question no. 62

Leak test

Are the clamping points all of the drilled holes (125 positions)?

Answer no. 62

Yes.

Question no. 63

Packing

From what I can see the parts are suspended from clamps. Are the clamps in 3 positions, fully open to allow the part to pass through, down to support the part, closed to clamp the part. If so, does the robot gripper need to do this action. Is there any other information or video of this systém?

Answer no. 63

The first loaded part will activate clamps for the second part mechanically during loading, no special action is needed

Question no. 64

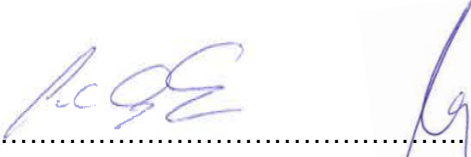
Packing

What is the packing box made from, how accurate are the positions for the robot

Answer no. 64

Development of rack is by customer BMW it should be ready for automatic load/upload

At the same time, due to the delay in publishing the answers, the contracting authority extends the deadline for submission of bids by 3 days, so until 21/ 08/ 2020 by 3:00 pm.



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Signature of the person authorized to act on behalf of the Contracting Authority