Viamed Pulse Oximeter Probe Design File

Design & Development Job Progress
Job Number/Description: Viamed Pulse Oximeter Probe
Progress
March 98 Meeting JSL. SN GGL.PL.DIL to decide to manufacture Viamed probes
March 98 DIL JSL visit LIP to assess manufacture of probe plastic parts
March98 Medilink visit to advise on local companies in plastic moulding
March 1998 visit to Hi Tech Plastics to assess a probe design
14/4/98 Minnesota discussions on cable +DB9
June 1998 JSL GGL visit Envitec discussed possiblity of joint project
Met Envitec & S Gorsky from Imaginex(Daishin LED supplier and ex designer of Aristo.Heathrow airport
Hammatsu visit to Viamed session on LED theoty
SN visit to Hammatsu offices in London
Medilink visit to Viamed concerning local suppliers
7/8/98 Contact with PDI regarding LED's
August JSL DIL discussions with Envitec in Wismar
August SN JSL visit Whitby and chandler. Pad is to be compress moulded and cleaned.
BICC discussions on cables
05/10/98 PDI LED samples inl Sensormedics
14/12/98 Sensocab discussions on cable

Jan 1999 Visit to USA on fact finding on SpO2 probe components Beta Biomed: Production techniques,test equipment, component specs and sourcing, opto electronics,connectors,clips,sub assemblies complete assemblies, quality control Photonic Detectors Inc; Production techniques,test equipment, component specs LED's Advantage Medical;Production tecluuques,test equipment, component specs and sonrcing,opto electronics, connectors clips,sub assemblies complete assemblies, quality control Medical Concepts; Production techniques,test equipment, component specs and sourcing,opto electronics, connectors clips, subqassemblies complete assemblies, quality control This visit brought new ideas and sources of new materials. Each company offered a different advantage
01/01/99 DB9 kits (MK1) from AMC
31/3/99 Samples of Pads from WCL poor Mk1
24/4/99 Strain relief samples VPA001/A from Hi Tech
01/05/99 Updated DB9 kits from AMC
19/5/99 sample os shells from Hi-Tech needs to be smoother
24/5/99 Discussion with UDT on cable + DB9
25/5/99 approval to Hi-tech on shells
24/5/99 Sample of Envitec pads
26/5/99 Samples of Pads from WCL poor Mk2
23/6/99 Sample of Minnesota clip
28/6/99 Mk2 Envitec pads
28/6/99 Discussion WCL on pad tools
7/7/99 Goss Components to discuss the spring requirements.
15/7/99 samples of Buttons from Hi Tech VPA 008
15/7/99 samples of pad mount from Hi-Tech
18/7/99 Mk3 Envitec Pads
26/07/99 Sample of spring from Goss
01/08/99 Discussion with Envitec on springs ; samples received. Two parts which are not suitable as they can fall apart from the clip in use.
16/08/99 Sample of spring from Goss
17/8/99 DB9 and cable from UDT 9905101
20/08/99 Sample of spring from Goss
23/08/99 Sample of spring from Goss
27/8/99 sample of pads from WCL MK3 9 cavity tool

10/9/99 sample of pads from WCL MK4 new tool hairline cracks
14/9/99 Discussions opened with Clinipol on pads
16/9/99 Improved spring from Goss
17/9/99 WCL samples MK5
22/9/99 Mk4 Envitec Pads
29/6/99 Sample of Envitec cable
5/10/99 SN meeting with Goss Sp02 finger probe spring: I attended a site meeting at Goss Components with Gerry Barton. The problem with the initial batches of the springs is lack of tension. The week prior to this visit we arranged for sample springs to be made out of a different grade of stainless steel (non-magnetic type 302). Initially Goss Components over specified the material used by using a medical grade of stainless steel which we found to be too soft and not appropriate for our application. With the new grade of steel, besides being stronger it is also possible to repeatedly temper thesprings and at higher temperatures, so increasing the tension of the spring. The lengths of the spring legs were adjusted so that they were exactly the same length, since of the springs were increased again by a further 1 mm. This is to make it more compatible with the original spring and also to ensure the aesthetic look of the springs once it has been assembled into thefinger clip. The diameter of the spring coil is compatible with diameter of the clip buttons, and the end of the spring is flush with the outside of the buttons.On initial tests the spring was found to be as good, if not better than the original. The tension is good so as to ensure consistent readings, without being too tight so as to adversely effect the perfusion of the patient. Aesthetically once the clip has been opened and extended the clip retains it's original position, so that there is not a gap between the button and the lower part of the clip assembly. It is anticipated that a sample batch of the new springs will be received on the 6 October. If these are satisfactory they will be officially approved by both Vianied and Goss Components. one for Viamed in order to carry out QA batch tests. A matter that needs to be resolved is what do we do with the 714 springs of lower tension that we presently have in stock. I suggest that we keep these (suitably marked) in case we ever have customers who require lower tension springs. Goss also have a stock of the softer medical grade stainless steel which they would like us to pay for, the price of this will be approximately £300. If necessary the spring can be further adjusted or redesigned i.e. by altering the diameter of the coil, the angle of the return, or the length of the legs.
27/09/99 sample of spring
03/10/99 Samples of Strain relief from Minnesota
03/10/99 Samples of Strain relief from MCI
06/10/99 Final spring version settled.
05/12/99 Visit to Clinipol GGL & JSL
21/1/2000 Discussion with Cablemaster on disposable cables sample received.
2/2/00 Samples from Clinipol of pads

1/3/00 samples of black pads from clinipol
15/3/00 Discussions at Viamed G Shaw Clinpol
30/3/00 samples of Clinipol pads & meeting with G Shaw