ANNEX B
(*Item* 6)

FORMAT FOR SENDING COMMENTS ON BIS DOCUMENTS

(Please use A4 size sheet of paper only and type within fields indicated. Comment(s) on each clauses/sub-clauses/table/fig. etc to be started in a fresh box. Information in Column 5 should include reasons for the comments and suggestions for modified wording of the clauses should be typed in Column 6 when the existing text is found not acceptable. Adherence to this format facilitates Secretariat's work) **DOC NO:**

TITLE: LARGE ANIMAL ENDOTRACHEAL TUBE WITH FUNNEL HUB

LAST DATE OF COMMENTS: 24.05.2023

NAME OF THE COMMENTATOR/ORGANIZATION:

Tamil Nadu Veterinary and Animal Sciences University

The clause mentioned in the BIS 14420:1996 dimensions are standard except for the following suggestions:

Sl. No. [1]	Clause/Subclause/ para/table/fig . No. commented [2]	Type of Comments (General(*ge*)/ Editorial(*ed*)/ Technical(*te*)) [3]	Justification* [4]	Proposed change* [5]
1	7	Bevel	Tracheal tube should have a bevel with the opening to the left when the tube is viewed from the machine end towards the concave aspect, bevel end upper most.	Tracheal tube should have an additional opening opposite to the bevel called as Murphy eye when the tube is viewed from the machine end towards the concave aspect, bevel end upper most to allow passage of gas and ventilation to the tip of the tube when it become obstructed, as may occur when up

				against the tracheal wall or with mucus plugging..
2	9 9.1.1	General	The inflating tube shall have an outside diameter not exceeding 4.5 mm and shall be situated on the	The cuff, an inflatable balloon near the end of the tube that surrounds its circumference and forms

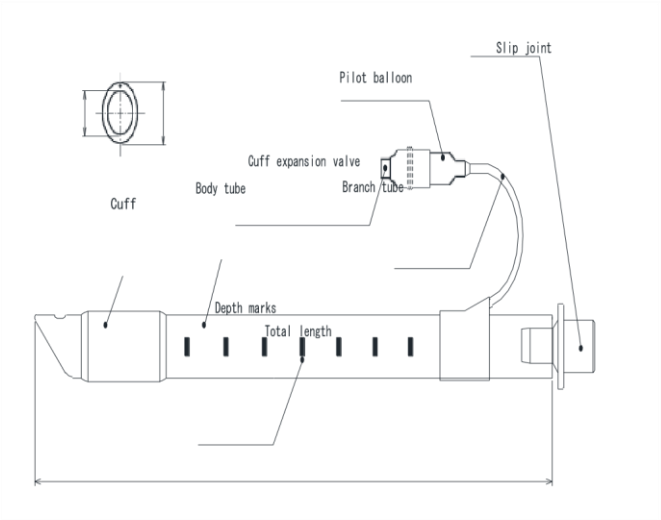
	9.1.2 9.1.3 9.1.4		concave side of the tracheal tube. The inflating tube shall not encroach on the lumen of the tracheal tube. The dimensions of the inflating tube shall be such that dimension S, shall be 75; percent of the length of the tracheal tube and the sum of S of the b and S, shall be not less than the length tu e. If the inflating tube is attached externally to the tracheal tube between the cuff and the point of separation ,the attachment shall be such that the inflating tube can be partly stripped from the tracheal tube, if required. The inflating tube shall be attached to the tracheal tube such that the angle between the inflating tube and the machine end of the tracheal tube at the point of separation shall not exceed 245degree	a seal against the wall of the trachea. The cuff is attached to a smaller inflatable balloon via a hollow catheter called the pilot line. The standard High volume low pressure HVLP PVC cuff is designed to inflate to 1.5–2 times the size of the normal trachea, polyurethane, which is considerably thinner (7 m) than PVC. The balloon, referred to as the pilot balloon, resides outside the patient and acts as a tactile gauge of cuff pressure, as well as a small reservoir to help reduce minor changes in intra cuff pressure.

2	4.1A	Technical	Durability, cleanable and compatible with while in use with anesthetic vapor and gases	PVC or Silicon tube with markings along the length and cuff. Markings along the length of the tube denote the number of centimeters from the tip of the tube, helping clinicians gauge initial insertion depth and monitor tube movement.
3	4.2 A	Technical	The tube material should have sufficient rigidity to allow the construction of tubes the thinnest possible wall which at the same	The tube material should have sufficient rigidity to allow the construction of tubes the thinnest possible wall
			time maintains a degree and kinking. When not in use, the specified radius of curvature of the tube should be approximately maintained. When in place it should be flexible and soft enough to conform to the anatomy of the animal without exerting undue pressure on the body tissues.	which at the same time maintains a degree and kinking. When in place it should be flexible and soft enough to conform to the anatomy of the animal without exerting undue pressure on the body tissues.
4	4.3A	Technical	Tracheal tubes should be readily detectable by Xray providing a suitable marker at the patient end of the tube	A radiopaque continuous marking imbedded in the length of the tube allows the distal tube tip to be identified on a chest radiograph to confirm appropriate depth of the tube.

5	4.4 A	Technical	A permanently bonded cuff should be capable of approximately symmetrical expansion when the cuff is inflated with air.	The connector at one end has a standardized external diameter of 15 mm to attach to equipment and the other end sized to snugly pressure-fit into the tube. With funnel hub All tubes have a standard adapter that allows a variety of respiratory or anesthesia equipment to be attached to the tube.

Dimensions: Large animal Endo tracheal tube with Funnel hub

Size Std. ID	Internal diameter	Outer Diameter	Length	Connector
14	14 mm	19mm	55-58cms	With Funnel hub
16	16 mm	22mm	65-70cms	With Funnel hub
18	18 mm	24mm	70-75cms	With Funnel hub
20	20 mm	26mm	90-95cms	With Funnel hub
22	22 mm	30mm	90-95cms	With Funnel hub
24	24 mm	32mm	90-95cms	With Funnel hub
26	26 mm	35mm	100-105 cms	With Funnel hub
28	28mm	39mm	100-105cms	With Funnel hub


Slip joint
Pilot balloon
Cuff expansion valve
Body tube
Branch tube
Cuff
Depth marks
Total length

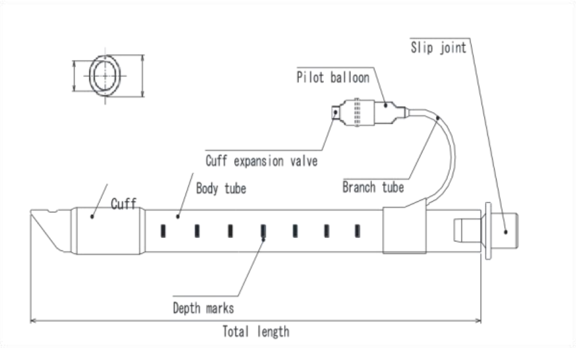
ENDOTRACHEAL TUBE FOR LARGE ANIMALS:

Raw material: PVC or Silicone rubber

Principle: For maintaining air way patency of trachea during upper airway obstruction, impaired consciousness, administration of anesthetics, etc. Air is injected into a cuff to fix and indwell to secure the airway.

Specifications:

- PVC or Silicon tube with markings along the length and cuff.
- Markings along the length of the tube denote the number of centimeters from the tip of the tube, helping clinicians gauge initial insertion depth and monitor tube movement.
- A radiopaque continuous marking imbedded in the length of the tube allows the distal tube tip to be identified on a chest radiograph to confirm appropriate depth of the tube.
- The tip of the tube is designed with a slant or bevel facing to the left side at the tip of the tube. Because the tube is generally introduced on the right side of the standard lefthanded laryngoscope, the left-sided bevel allows better visualization of the area ahead of the tube and easier passage through the vocal cords.
- Opposite the bevel, there is generally an additional side hole called the Murphy eye. Its purpose is to allow passage of gas and ventilation should the tip of the tube become obstructed, as may occur when up against the tracheal wall or with mucus plugging.
- All tubes have a standard adapter that allows a variety of respiratory or anesthesia equipment to be attached to the tube.
- The connector at one end has a standardized external diameter of 15 mm to attach to equipment and the other end sized to snugly pressure-fit into the tube.



- The cuff, an inflatable balloon near the end of the tube that surrounds its circumference and forms a seal against the wall of the trachea.

- The cuff is attached to a smaller inflatable balloon via a hollow catheter called the pilot line.
- The standard High volume low pressure HVLP PVC cuff is designed to inflate to 1.5–2 times the size of the normal trachea, polyurethane, which is considerably thinner (7 m) than PVC.
- The balloon, referred to as the pilot balloon, resides outside the patient and acts as a tactile gauge of cuff pressure, as well as a small reservoir to help reduce minor changes in intra cuff pressure.
- A one-way valve attached to the pilot balloon prevents gas from escaping the cuff and provides a connector to attach a syringe or pressure-monitoring device.

Size	ID	OD	Length
14	14 mm	19mm	55-58cms
16	16 mm	22mm	65-70cms
18	18 mm	24mm	70-75cms
20	20 mm	26mm	90-95cms
22	22 mm	30mm	90-95cms
24	24 mm	32mm	90-95cms
26	26 mm	35mm	100-105 cms
28	28mm	39mm	100-105cms