

3. Measurement and Inspection Methods

Inspection Item	Inspection Details	Measurement and Inspection Methods	Inspection timing (period)		Safety	Comments
			1	2		
1. Confirmation of Operating Environment						◆mark: Refer to M506-E345.
(1) Temperature and humidity	Check the instrument specifications.	Check the air-conditioning equipment.	*	*		
(2) Power supply	Measure the power supply voltage. (100 VAC or 200 VAC)	Measure with a voltmeter (RMS). If the value fluctuates over time, enter the amplitude of fluctuation.	*	*		
(3) Check the earth	Check the earth. Check the earth connection at the power plug.	Visually check the earth belt (GND wire) for damage, corrosion, and adhering foreign matter. Check that the power plug is normal.	*		@	
2. Confirmation of Instrument Condition						
(1) Exterior and Interior Appearance	Check if there is any large dirt or damage	Check appearance	*	*		
(2) Caution/Warning Labels	Contamination and scratching	Check for abnormalities and clean. Replace to the new one if they are damaged.	*	*		
(3) Cleaning of Instrument	Clean the instrument by using the cleaner	Clean the instrument by using the cleaner	*			
(4) Check cable connection	Check the connection of each cables.	Check the terminals and connectors of each cables	*			
(5) Check cable condition	Check if there is any rubbing, twisting or too tight tension etc. of each cables.	Check each cables (Refer to Item No.3 or later for detail.)	*			
(6) Check fixing condition of the mechanical parts	Check fixing condition of each mechanical parts	Refer to Item No.3 or later for detail.	*	*	@	

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3. X-Ray Generator						
(1) Radiography circuit operation	Control circuits, operation switches, etc.	Instrument operates normally	*	*		
(2) Starter circuit operation	Control circuits, operation switches, etc.	Instrument operates normally	*	*		
(3) X-ray tube protective circuit operation	Check that instrument operates normally.	Check that instrument operates normally.	*	*		
(4) Tube voltage accuracy	For measurement method, see Supplemental Explanations.	For measurement method, see Supplemental Explanations.	*			
(5) Tube current accuracy	For measurement method, see Supplemental Explanations.	For measurement method, see Supplemental Explanations.	*			
(6) Exposure time accuracy	For measurement method, see Supplemental Explanations.	For measurement method, see Supplemental Explanations.	*			
(7) High-voltage cables and bushings	Check for discharge marks. Check the amount of the grease and condition of the packing.	Check for abnormalities.	*			
4. X-ray tube unit						
(1) X-ray tube unit	Oil leaks, noise from rotation	Check for abnormalities.	*	*		
(2) High-voltage cables and bushings	Check for discharge marks. Check the amount of the grease and condition of packing.	Check for abnormalities.	*	*		
(3) Low-voltage cables	Check for rubbing, twisting, and too tight tension.	Check for abnormalities.	*	*		

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5. Main instrument						
(1) Support arm vertical movement	a. Check the operation.	Check for abnormalities.	*	*		
	b. Wire rope damage and attachment.	Check for abnormalities. Replace if damaged. Apply grease.	*	*	@	◆ Refer to ZCHI-E6E0001.
	c. Check the brake.	Check for abnormalities.	*			
(2) Support arm lateral movement	a. Check the operation.	Check for abnormalities.	*	*		
	b. Chain damage and attachment.	Check for abnormalities.	*			
	c. Check the tightness of rail and bearing mounting screws.	Check for abnormalities.	*	*	@	
(3) Column rotation	a. Check the operation.	Check for abnormalities.	*	*		
	b. Check the brake.	Check for abnormalities.	*			
	c. Check the tightness of the column mounting screws.	Check for abnormalities.	*	*	@	Ensure that column is not tilted and there is no crack at the base.
(4) Tube rotation about arm	a. Check the operation.	Check for abnormalities.	*	*		
	b. Check the fixing force.	Check for abnormalities.	*			
	c. Check the tightness of the tube support mounting screws.	Check for abnormalities.	*	*	@	
(5) Tube rotation about tube axis	a. Check the operation.	Check for abnormalities.	*	*		
	b. Check the fixing force.	Check for abnormalities.	*			
	c. Check the tightness of the tube support mounting screws.	Check for abnormalities.	*	*	@	
(6) Arm catch operation	a. Check the arm fixing and display.	Check for abnormalities.	*	*	@	Refer to SVHI-E14E004.
	b. Check the tightness of the arm catch mounting screws.	Check for abnormalities.	*	*	@	
(7) Operation switches and displays	a. Check the switch operation and display.	Check for abnormalities.	*	*	@	
	b. Check the contact of terminals and connectors.	Check for abnormalities.	*	*		

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6. Travel unit						
(1) Travel operation	a. Check the operation (handle).	Check for abnormalities.	*	*	@	
	b. Check the brake.	Check for abnormalities.	*	*	@	
	c. Check the tightness of the travel-wheel mounting screws.	Check for abnormalities.	*	*	@	
	d. Check the tightness of the caster mounting screws.	Check for abnormalities.	*	*	@	
7. Collimator						
(1) Open/close mechanism	a. Check for abnormal noise.	Check for abnormalities.	*			
	b. Wire rope damage and attachment.	Check for abnormalities. Apply grease after inspection.	*			◆
	c. Check the damage and fixing of Front/Intermediate leaves.	Check for abnormalities.	*			
(2) Dimensions of the effective irradiation field	Check the dimensions.	Check for abnormalities.	*			
(3) Fixing of main unit	Check the tightness of the mounting.	Check for abnormalities.	*	*	@	
(4) Rotation mechanism	Check abrasion of the rotary ring and collimator rotation operation.	Check for abnormalities. Apply grease after inspection.	*			Refer to SVHI-E11E010.
8. Others						
(1) Cassette box	a. Check the cassette storage operation	Check for abnormalities.	*			
	b. Check the tightness of the mounting.	Check for abnormalities.	*		@	
(2) Cord reel	a. Check the cord storage operation.	Check for abnormalities.	*			
	b. Check the cable and plug.	Check for damage. If the cable including the plug is damaged or disconnected, replace the entire cord reel assembly.	*	*	@	Refer to SVHI-E16E009A SVHI-E16E010.
(3) Remote controller option	a. Check the communications operation.	Check for abnormalities.	*			
(4) Dose Area Product Meter	a. Check the display and accuracy of area dose.	Check for abnormalities. Readjust if necessary. (Check the accuracy referring to item h. of "Supplemental Explanation - Measurement Method".)	*			Refer to item h. of "Supplemental Explanation - Measurement Method".
(5) Protective Screen option	a. Check the damage.	Check for damage or abnormalities.	*			
	b. Check the tightness of the mounting.	Check for abnormalities.	*			

Caution: As the instrument travels around in the hospital, ensure that all mounting screws are tight.