

低烟无(低)卤阻燃、耐火电线电缆

LOW-SMOKE NON(LOW)-HALOGEN FLAME-RETARDANT FIRE RESISTANT CABLE



※用途 Application

低烟无(低)卤电线电缆在火焰燃烧情况下产生极少量烟雾, 释放的气体不含卤(低卤)元素, 无毒(低毒)。当火灾发生时, 可大大减少对仪器、设备和人体的危害, 因而被广泛应用于高层建筑、医院、大型图书馆、体育馆、防灾指挥调度楼、车站和民用机场、旅客候车室、重点文物保护单位以及地铁、地下商场或人口密集的公共场所。

本公司开发生产的额定电压 35kV 及以下塑料绝缘电缆电线, 其使用性能不仅符合 GB/T 12706-2008、GB/T5023-2008 和 GB /T9330-2008、DJ08-93-2002 规定要求, 并且已形成系列, 即阻燃型、耐火型, 特别是低烟无卤(低卤)性能符合国家标准 GB/T 17650-1~2-1998、GB/T 17651.1~2-1998, 经国家一级科技查新, 该类产品达到同类产品的国内先进水平。

Low-smoke free-halogen flame-retardant cables can produces little smoke and cuousgas without halogen or with little halogen when combustion. It can extremely reduce the damage to the instruments, equipment and body as the fire occurred. So, it was widely used in the crowded public infrastructure such as high-rise building, large-sized library, gymnasium, railway station, airport, passenger waiting room,cultural relic, subway, underground shop, etc.

The property of the rated voltage under 35KV plastics insulated cable developed by our company, comply with the requirement of GB/T 12706-2008,GB 5023-2008 and GB/ T 9330-2008, DJ08-93-2002. Meanwhile, its low-smoke and free-halogen property comply with the standard of GB/T 17650-1~2-1998, GB/T 17651.1~2-1998. By the national technique requirements, this type of products reach to domestic advanced level (Low-smoke free-halogen flame-retardancy cables).

※产品的型号、名称见表 1 The Model and name (see Table 1)

表 1 Table 1

序号 No .	型号 Model	名称 Name	阻燃级别 Flame retardant grade
1	DDZ-VV DDZ-VLV DDZ-VY DDZ-VLY	低烟低卤聚氯乙烯绝缘低烟低卤聚氯乙烯 / 聚乙烯护套阻燃电力电缆 Low-smoke low-halogen PVC insulated low-smoke low-halogen PVC/PE sheathed flame-retardant power cables	A、B、C
	DDZ-VV22 DDZ-VLV22 DDZ-VV23 DDZ-VLV23	低烟低卤聚氯乙烯绝缘钢带铠装低烟低卤聚氯乙烯 / 聚乙烯护套阻燃电力电缆 Low-smoke low-halogen PVC insulated steel tape armored low-smoke low-halogen PVC/PE sheathed flame-retardant power cables	
	DDZ-VV32 DDZ-VLV32 DDZ-VV33 DDZ-VLV33 DDZ-VV42 DDZ-VLV42 DDZ-VV43 DDZ-VLV43	低烟低卤聚氯乙烯绝缘钢丝铠装低烟低卤聚氯乙烯 / 聚乙烯护套阻燃电力电缆 Low-somke low-halogen PVC insulated steel wire armored low-smoke low-halogen PVC/PE sheathed flame-retardant power cables	
2	DDZ-YJ(F)V DDZ-YJ(F)LV	(辐照) 交联聚乙烯绝缘低烟低卤聚氯乙烯护套阻燃电力电缆 (Irradiated) XLPE insulated low-smoke low-halogen PVC sheathed flame-retardant power cables	A、B、C
	DDZ-YJ(F)V22 DDZ-YJ(F)LV22	(辐照) 交联聚乙烯绝缘钢带铠装低烟低卤聚氯乙烯护套阻燃电力电缆 (Irradiated) XLPE insulated steel tape armored low-smoke low-halogen PVC sheathed flame-retardant power cables	
	DDZ-YJ(F)V32 DDZ-YJ(F)LV32 DDZ-YJ(F)V42 DDZ-YJ(F)LV42	(辐照) 交联聚乙烯绝缘钢丝铠装低烟低卤聚氯乙烯护套阻燃电力电缆 (Irradiated) XLPE insulated steel wire armored low-smoke low-halogen PVC sheathed flame-retardant power cables	

续表 1 Table 1

序号 No.	型号 Model	名称 Name	阻燃级别 Flame retardant grade
3	DDZ-KVV DDZ-KYJ(F)V	低烟低卤聚氯乙烯 / (辐照) 交联聚乙烯绝缘低烟低卤聚氯乙烯护套阻燃控制电缆 Low-smoke low-halogen PVC/(Irradiated) XLPE insulated low-smoke low-halogen PVC sheathed flame-retardant control cables	A、B、C
	DDZ-KVV22 DDZ-KYJ(F)V22	低烟低卤聚氯乙烯 / (辐照) 交联聚乙烯绝缘钢带铠装低烟低卤聚氯乙烯护套阻燃控制电缆 Low-smoke low-halogen PVC/(Irradiated) XLPE insulated steel tape armored low-smoke low-halogen PVC sheathed flame-retardant control cables	
	DDZ-KVVP DDZ-KYJ(F)VP	低烟低卤聚氯乙烯 / (辐照) 交联聚乙烯绝缘铜丝编织屏蔽低烟低卤聚氯乙烯护套阻燃控制电缆 Low-smoke low-halogen PVC/(Irradiated) XLPE insulated copper wire screened low-smoke low-halogen PVC sheathed flame-retardant control cables	
	DDZ-KVVP2 DDZ-KYJ(F)VP2	低烟低卤聚氯乙烯 / (辐照) 交联聚乙烯绝缘铜带屏蔽低烟低卤聚氯乙烯护套阻燃控制电缆 Low-smoke low-halogen PVC/(Irradiated) XLPE insulated steel tape screened low-smoke low-halogen PVC sheathed flame-retardant control cables	
	DDZ-KVV32 DDZ-KYJ(F)V32	低烟低卤聚氯乙烯 / (辐照) 交联聚乙烯绝缘铜丝铠装低烟低卤聚氯乙烯护套阻燃控制电缆 Low-smoke low-halogen PVC/(Irradiated) XLPE insulated steel wire armored low-smoke low-halogen PVC sheathed flame-retardant control cables	
4	DDZ-BV DDZ-BLV	低烟低卤聚氯乙烯绝缘阻燃电线 Low-smoke low-halogen PVC insulated flame-retardant electric wire	B、C、D
	DDZ-BVV DDZ-BLVV	低烟低卤聚氯乙烯绝缘和护套阻燃电线 Low-smoke low-halogen PVC insulated sheathed flame-retardant electric wire	
	DDZ-BVR	低烟低卤聚氯乙烯绝缘阻燃软电线 Low-smoke low-halogen PVC insulated flame-retardant flexible electric wire	
5	WDZ-YJ(F)E WDZ-YJ(F)LE WDZ-YJ(F)Y WDZ-YJ(F)LY	(辐照) 交联聚乙烯绝缘低烟无卤阻燃聚烯烃护套电力电缆 (Irradiated) XLPE insulated low-smoke free-halogen flame-retardant polyolefin wire power cables	A、B、C
	WDZ-YJ(F)E23 WDZ-YJ(F)LE23 WDZ-YJ(F)Y23 WDZ-YJ(F)LY23	(辐照) 交联聚乙烯绝缘钢带铠装低烟无卤阻燃聚烯烃护套电力电缆 (Irradiated) XLPE insulated steel tape armored low-smoke free-halogen flame-retardant polyolefin sheathed power cables	
	WDZ-YJ(F)E33 WDZ-YJ(F)LE33 WDZ-YJ(F)Y33 WDZ-YJ(F)LY33 WDZ-YJ(F)E43 WDZ-YJ(F)LE43 WDZ-YJ(F)Y43 WDZ-YJ(F)LY43	(辐照) 交联聚乙烯绝缘铜丝铠装低烟无卤阻燃聚烯烃护套电力电缆 (Irradiated) XLPE insulated steel wire armored low-smoke free-halogen flame-retardant polyolefin sheathed power cables	
6	WDZ-KYJ(F)E WDZ-KYJ(F)Y	(辐照) 交联聚乙烯绝缘低烟无卤阻燃聚烯烃护套控制电缆 (Irradiated) XLPE insulated low-smoke free-halogen flame-retardant polyolefin sheathed control cables	A、B、C
	WDZ-KYJ(F)E23 WDZ-KYJ(F)Y23	(辐照) 交联聚乙烯绝缘钢带铠装低烟无卤阻燃聚烯烃护套控制电缆 (Irradiated) XLPE insulated steel tape armored low-smoke free-halogen flame-retardant polyolefin sheathed control cables	
	WDZ-KYJ(F)EP WDZ-KYJ(F)YP	(辐照) 交联聚乙烯绝缘铜丝编织屏蔽低烟无卤阻燃聚烯烃护套控制电缆 (Irradiated) XLPE insulated copper wire screened low-smoke free-halogen flame-retardant polyolefin sheathed control cables	
	WDZ-KYJ(F)EP2 WDZ-KYJ(F)YP2	(辐照) 交联聚乙烯绝缘铜带屏蔽低烟无卤阻燃聚烯烃护套控制电缆 (Irradiated) XLPE insulated copper tape screened low-smoke free-halogen flame-retardant polyolefin sheathed control cables	

续表 1 Table 1

序号 No.	型号 Model	名称 Name	阻燃级别 Flame retardant grade
7	WDZ-KYJ(F)E33 WDZ-KYJ(F)Y33	(辐照) 交联聚乙烯绝缘钢丝铠装低烟无卤阻燃聚烯烃护套控制电缆 (Irradiated) XLPE insulated steel wire armored low-smoke free-halogen flame-retardant polyolefin sheathed control cables	B、C、D
	WDZ-BYJ(F) WDZ-BLYJ(F) WDZ-BY WDZ-BLY	(辐照) 交联型 / 非交联型低烟无卤阻燃聚烯烃绝缘电线 (Irradiated) cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardant polyolefin insulated electric wires	
	WDZ-BYJ(F)E WDZ-BLYJ(F)E WDZ-BYE WDZ-BLYE	(辐照) 交联型 / 非交联型低烟无卤阻燃聚烯烃绝缘低烟无卤阻燃聚烯烃护套电线 (Irradiated) cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardant polyolefin insulated low-smoke free-halogen flame-retardant polyolefin sheathed electric wires	
	WDZ-BYJ(F)R WDZ-BYR	(辐照) 交联型 / 非交联型低烟无卤阻燃聚烯烃绝缘软电线 (Irradiated) cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardant polyolefin insulated flexible electric wires	
8	WDZN-YJ(F)E WDZN-YJ(F)Y	铜芯 (辐照) 交联聚乙烯绝缘低烟无卤阻燃聚烯烃护套耐火电力电缆 Copper core (Irradiated) XLPE insulated low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant power cables	A、B、C
	WDZN-YJ(F)E23 WDZN-YJ(F)Y23	铜芯 (辐照) 交联聚乙烯绝缘钢带铠装低烟无卤阻燃聚烯烃护套耐火电力电缆 Copper core (Irradiated) XLPE insulated steel tape armored low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant power cables	
9	WDZN-YJ(F)E33 WDZN-YJ(F)Y33 WDZN-YJ(F)E43 WDZN-YJ(F)Y43	铜芯 (辐照) 交联聚乙烯绝缘钢丝铠装低烟无卤阻燃聚烯烃护套耐火电力电缆 Copper core (Irradiated) XLPE insulated steel wire armored low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant power cables	A、B、C
	WDZN-KYJ(F)E WDZN-KYJ(F)Y	(辐照) 交联聚乙烯绝缘低烟无卤阻燃聚烯烃护套耐火控制电缆 (Irradiated) XLPE insulated low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant control cables	
	WDZN-KYJ(F)E23 WDZN-KYJ(F)Y23	(辐照) 交联聚乙烯绝缘钢带铠装低烟无卤阻燃聚烯烃护套耐火控制电缆 (Irradiated) XLPE insulated steel tape armored low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant control cables	
	WDZN-KYJ(F)EP WDZN-KYJ(F)YP	(辐照) 交联聚乙烯绝缘铜丝编织屏蔽低烟无卤阻燃聚烯烃护套耐火控制电缆 (Irradiated) XLPE insulated copper thread mesh screened low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant control cables	
	WDZN-KYJ(F)EP2 WDZN-KYJ(F)YP2	(辐照) 交联聚乙烯绝缘铜带屏蔽低烟无卤阻燃聚烯烃护套耐火控制电缆 (Irradiated) XLPE insulated copper tape screened low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant control cables	
	WDZN-KYJ(F)E33 WDZN-KYJ(F)Y33	(辐照) 交联聚乙烯绝缘钢丝铠装低烟无卤阻燃聚烯烃护套耐火控制电缆 (Irradiated) XLPE insulated steel wire armored low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant control cables	

续表 1 Table 1

序号 No	型号 Model	名称 Name	阻燃级别 Flame-retardant grade
10	WDZN-BYJ(F) WDZN-BY	(辐照) 交联型 / 非交联型低烟无卤阻燃聚烯烃绝缘耐火电线 (Irradiated) cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardant polyolefin insulated fire resistant electric wires	B、C、D
	WDZN-BYJ(F)E WDZN-BYE	(辐照) 交联型 / 非交联型低烟无卤阻燃聚烯烃绝缘低烟无卤阻燃聚烯烃护套耐火电线 (Irradiated) cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardant polyolefin insulated low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant electric wires	
	WDZN-BYJ(F)R WDZN-BYR	(辐照) 交联型 / 非交联型低烟无卤阻燃聚烯烃绝缘低烟无卤阻燃聚烯烃耐火软电线 (Irradiated) cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardant polyolefin insulated low-smoke free-halogen flame-retardant polyolefin sheathed fire resistant flexible electric wires	

※产品使用场所的分级及选用 Grade-classification & Application

1. 低烟无(低)卤使用场所应根据建筑物的使用性质、火灾危险性、疏散和扑救难度等分为特级、一级、二级、三级。
2. 低烟无(低)卤电线电缆成束敷设时, 应采用阻燃电线电缆, 阻燃级别选择应符合表 2、表 3, 在外部火势作用下, 需保持线路完整性、维持通电的场所, 其线路应采用耐火电线电缆。

1.Low-smoke free/low-halogen model divides into four kinds:special class,first class,secondclass,third class according to the property, fire damage and evacuation & extinguishment difficulty. Meanwhile, it also complies with the requirement of Table3-2

2.When they are laying in colligation, the low-smoke free/low-halogen wires and cablessould be flame-retardant types that grades comply with Table3-3 and Table3-4. If the location needs integrated lines and constant electricity under the outside fire, they should be fire resistant types.

电线的阻燃级别选择 Table2 the grade choice to the flame-retardant property of electric wires

表 2 Table 2

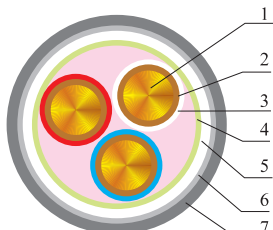
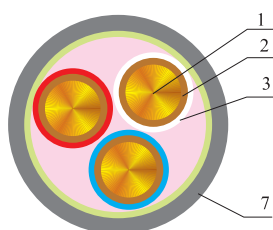
适用场所 Applicable place	电线截面 Sectional area	阻燃级别 Flame-retardant grade
特级 Special grade	50mm ² 及以上: 50mm ² and above	B 级 B grade
	35mm ² 及以上: 35mm ² and above	C 级 C grade
一级 First grade	50mm ² 及以上: 50mm ² and above	C 级 C grade
	35mm ² 及以上: 35mm ² and above	D 级 D grade
二级、三级 Second grade, third grade	所有截面 All area	D 级 D grade

电缆的阻燃级别选择 Table 3 the grade choice to the flame-retardant property of cables

表 3 Table 3

适用场所 Applicable place	阻燃级别 Flame-retardancy grade
特级 Special grade	A 级 A grade
一级 First grade	B 级 B grade
二级、三级 Second grade, third grade	C 级 C grade

※电缆结构图 Structure



- 1、导体 Conductor
- 2、耐火绝缘层 Fire-resistant insulation layer Insulation
- 3、XLPE 绝缘 XLPE insulation
- 4、隔离层 Insulation
- 5、内衬层 Inner covering
- 6、铠装层 Armor
- 7、外护套 Oversheath

等级 level	使用场所 Use place	
特级 super	建筑高度超过100m的高层民用建筑(超高层住宅除外) Building height more than 100m high-rise civil buildings (except super-tall residential)	
	建筑高度超过100m的商层住宅 Residential building height of more than 100 m business layer	
一级 Level 1	建筑高度不超过100m的高层民用住宅 Building height less than 100 m of high-rise residential houses	一类建筑(一类建筑的住宅除外) Type of construction (except for a class of residential buildings)
	建筑高度不超过24m的民用建筑和建筑高度超过24m的单一公共建筑 Building height is not more than 24 m civil construction and building height more than 24 m single public buildings	<ol style="list-style-type: none"> 1、200床及以上的病房楼, 每层建筑面积10001112 及以上的门诊楼; 2、每层建筑面积3000m 及以上的百货楼、展览楼、高级旅馆、财贸金融楼、电信楼、高级办公楼; 3、藏书超过100 万册的图书馆、书库; 4、超过3000 座位的体育馆; 5、重要的科研楼、资料档案楼; 6、市级的邮政楼、广播电视楼、电力调度楼、防灾指挥调度楼、车站旅客候车室、民用机场候机室 7、重点文物保护单位; 8、大型以上的影剧院、会堂、礼堂; 9、建筑面积在200m² 及以上的公共娱乐场所。 <p>More than 1, 200 beds, and the ward floor, each layer of outpatient service building construction area of 10001112 and above;</p> <p>2, each layer of a building area of 3000 m and above department building, exhibition building, senior hotel, finance and trade finance, telecommunications, floor, senior office buildings;</p> <p>3, library of more than 1 million volumes, and library;</p> <p>4, more than 3000 - seat stadium;</p> <p>5 data files, important research activities building, floor,</p> <p>6, municipal post office building, radio and television building, electric power dispatching, disaster prevention command scheduling floor, station passenger waiting room, the civil airport terminal</p> <p>7, key cultural relic preservation sites;</p> <p>More than 8, large cinema, hall, hall;</p> <p>9, construction area of over 200 m² and places of public entertainment.</p>
	地下民用建筑 Underground civil building	<ol style="list-style-type: none"> 1、地下铁道及地下铁道车站; 2、地下影脚院、礼堂; 3、使用面积超过1000m² 的地下商场、医院、旅馆、展览厅及其他商业或公共活动场所; 4、重要的实验室和图书、资料、档案库。 <p>1, underground railway and underground railway station;</p> <p>2, underground shadow foot house, auditorium;</p> <p>3, use area of more than 1000 m² of underground shopping malls, hospitals, hotels, exhibition hall and other commercial or public places;</p> <p>4, key laboratories and books, information and archives.</p>
二级 Level 2	建筑高度不超过100m的高层民用建筑 Building height is not more than 100 m of high-rise civil buildings	一类建筑的住宅 二类建筑(二类建筑的住宅除外) Residence of the first type building second type building (except the residence)
	建筑高度不超过24m的民用建筑 Building height is not more than 24 m civil buildings	<ol style="list-style-type: none"> 1、每层建筑面积超过2000 但不超过3000m² 的商业楼、财贸金融楼、电信楼、展览楼、旅馆、办公楼、车站、海河客运站、航空港等公共建筑及其他商业或公共活动场所; 2、区县级的邮政楼、广播电视楼、电力调度楼、防灾指挥调度楼; 3、中型以下的影脚院; 4、图书馆、书库、档案楼; 5、建筑面积在200m² 以下的公共娱乐场所。 <p>1, each layer of a building area of more than 2000 throughout but not more than 3000 m² of commercial buildings, finance and trade finance, telecommunications, floor, exhibition building, hotels, office buildings, railway stations, bus terminal of haihe river, airports and other public buildings and other commercial or public places;</p> <p>2, the district post office building, radio and television building, electric power dispatching, disaster prevention command scheduling floor;</p> <p>3, medium-sized theater under;</p> <p>4, the library, library, archives building;</p> <p>5, building area of 200 m² of the following places of public entertainment.</p>

等级 level	使用场所 Use place	
二级 Level 2	地下民用建筑 Underground civil building	长度超过500m的城市隧道; 使用面积不超过1000m ² 的地下商场、医院、旅馆、展览厅及其他商业或公共场所 Length of more than 500 m urban tunnel; Use area of not more than 1000 m ² of underground shopping malls, hospitals, hotels, exhibition halls and other commercial or public places
三级 Level 3	不属于特级、一级、二级的其他民用建筑 Do not belong to the special, primary and secondary other civil buildings	

注: 1、一类建筑、二类建筑的划分, 应符合现行国家标准(高层民用建筑设计防火规范) (Gb50045) D 的规定。

2、本表未列出的建筑的等级可按同类建筑的类比原则确定。

Note: 1, a class, second class, shall be operator sets the current national standard () of the code for fire protection design of tall buildings (Gb50045) D.

2, not listed in this table construction level is decided according to the analogy principle of similar buildings.

※产品技术性 Technical product

(1) 电线电缆导体正常运行时的最高温度及短路时(最长持续时间不超大超过5s)最高温度:

低烟低卤聚乙烯绝缘为70℃, 短路时最高温度不超过160℃;

交联聚乙烯绝缘为90℃, 热塑性低烟无卤聚烯烃绝缘为80℃, 短路时最高温度不超过250℃。辐照

交联型聚乙烯绝缘为105℃、125℃, 短路时最高温度不超过250%。

(2) 低烟无(低)卤电缆的安装条件及允许连续载流量均与相应非低烟无(低)卤型号规格电缆电线相同。

(3) 电缆电线在燃烧时具有低烟、无(低)卤、阻燃和耐火性能, 具体指标如表

(1) when the normal operation of electric wire electric cable conductor when the highest temperature and short circuit (the longest when large ask no more than 5 s) the highest temperature:

Low smoke low halogen polyethylene insulation at 70 °C the highest temperature does not exceed 160°C when short circuit;

Cross-linked polyethylene insulation at 90 °C thermoplastic low smoke zero halogen polyolefin insulation at 80 °C short circuit when the highest temperature does not exceed 250 °C irradiation

Cross-linked polyethylene insulation at 105 °C 125 °C, the short circuit when the highest temperature is not more than 250%.

(2) low smoke no (low) halogen cable installation conditions and allows continuous load flow with the corresponding low smoke no halogen specifications (low) the same cable wire.

(3) the cable wire with low smoke when burning, no (low) halide, flame retardant and fireproof performance, specific indicators such as table

序号 Serial number	试验项目 test item	标准要求(无卤) The standard requirements (halogen)	标准要求(低卤) The standard requirements (low haloge)
1	电线电缆单根垂直燃烧试验 —上支架下缘与炭化部分起点间距离 —燃烧向下延伸至上支架下段距离 Wire and cable single lovely straight combustion test An upper bracket and the lower edge of the distance between the starting point of charring part A combustion extended down to support distance	≥ 50mm ≤ 540mm	≥ 50mm ≥ 540mm
2	电缆成束燃烧试验 -- 炭化部分所选高度 Cable bundle combustion test -- part of the selected high carbonization	≤ 25turn	≤ 25turn
3	耐火试验 Fireresistancetesting	燃烧试验期间, 施加额定电压, 3A 熔丝不熔断 Astesfingbearrated voltageandthe3Afuse willnotbemelted	燃烧试验期间, 施加额定电压, 3A 熔丝不熔断 Astesfingbearrated voltageandthe3Afuse willnotbemelted
4	PH 值 PHvalue	≥ 4.3	≥ 2.5
5	电导率 Conductance	≤ 10us/n1m	无要求 There is no requirement
6	电缆烟密度试验 -- 最小透光率 Cable smoke density test - the minimum transmission in prison	≥ 60%	≥ 30%