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在国家框架下城市I/M制度的实施

Implementation of city-wide I/M program under a national framework

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国家I/M框架

National I/M Framework

- **Air quality needs** 空气污染状况
 - × 是否超标 **Exceeding AQS?**
 - × 机动车是否重要来源 **From motor vehicle?**
- **Vehicle population** 机动车保有量
- **Economy level** 经济水平
- **Public opinion** 公众意见

- 加强型 **Enhanced I/M**, 基本型 **Basic I/M?**



I/M performance standard 技术规范

----Enhanced 加强型

→ 评估指标

Performance

× 排放削减量
Emission reduction

→ 组织方式**Network**

× 集中式**centralized**

→ 检测频次**Frequency**

× 年检**annual**

→ 覆盖车辆**Vehicle coverage**

× 所有车辆 **all**

→ 检测方法**Test procedure**

× 简易工况**Loaded test**

→ **Cutpoints**排放限值

× **National standard**国家标准

→ **Visual Check**目测
+OBD

→ 路检**Roadside test**



I/M performance standard 技术规范

----Basic 基本型

→ 评估指标

Performance

- × 排放削减量 **Emission reduction**

→ 组织方式 **Network**

- × 集中式 **centralized**
- × 混合式 **hybrid**

→ 检测频次 **Frequency**

- × 年检 **annual**

→ 覆盖车辆 **Vehicle**

coverage

- × 所有车辆 **all**

→ 检测方法 **Test procedure**

- × **Idle test** 怠速/自由加速

→ **Cutpoints** 排放限值

- × **National standard** 国家标准

→ **Visual Check** 目测

→ 路检 **Roadside test**



制度要求 **Requirements**

- 强制检测机制与部门协调 **Enforcement and coordination**
 - × **renewal of registration** 如年审把关
- 合理的检测费 **reasonable test charge**
- 检测质量控制 **Quality control**
- 检测质量审计保障 **Audit**
- 承包商/检测机构的管理 **Contractor**



制度要求 **Requirements**

- 检测人员的培训和管理 **Training**
- 检测数据收集与分析报告 **Data reporting**
- 公众信息 **Public awareness**
- 维修培训与宣传 **Repair training**
- 制度效果评估 **Effectiveness evaluation**



城市I/M实施 City-wide I/M implementation

- 包括下述内容的实施计划 **Implementation plan covering all items**
 - × 空气质量资料 **Air quality data**
 - × **NOx是否重点? NOx shall be addressed?**
 - × 应执行的I/M制度类型 **Program type**
 - × 覆盖范围与检测频次 **Vehicle coverage and test frequency**

This is designed in Beijing's program



I/M实施规划 I/M implementation plan

→ 检测网络类型 **Network type**

× 集中式 **Centralized**

★ 测试线车辆数大, 政府或合同公司经营
government or contractor run

★ 最好的方式, 最有效 **Most effective**

★ 管理成本最低 **Lowest management cost**

★ 舞弊问题最少, 质量控制最好 **Best quality**

× 或证明等效? **Equally effective?**

The hybrid network is not changed in Beijing



I/M实施规划 I/M implementation plan

- 北京检测网络类型 **Network type of Beijing**
 - × 兼营调修业务 **Inspection station runs small repairs**
 - × 各检测站存在业务竞争 **Competition for customer**
 - ★ 置信度低至少**50%**
 - × 合法授权必须依附安全检测 **Enforcement bind to safety test stations**

The current program in Beijing is much less effective than a real centralized one (Contractor run)



I/M实施规划 I/M implementation plan

→ 收费与工具资源 Resources

- × 覆盖所有环节(质量审计, 数据分析, 审计设备与人员, 公众教育, 等) **Covering quality audit, data analysis, auditing equipment and manpower, public awareness, etc.**

The current test charge doesn't include above items

→ 质量控制 Quality control

This is covered in Beijing program



实施方法 **Enforcement**

→ 强制测试 **Testing**

- × 注册管理 **registration**
- × 贴标签 **sticker**
- × 计算机管理 **computer**
- × 惩罚 **punishment**

→ 确保测试公正性

- × 自动化系统 **computerized**
- × 不直接收费 **Indirect charging**

→ 强制维修 **Repair**

- × 修理工的技术培训 **Mechanic training**
- × 采用瞬态测试 **Transient testing**
- × 同时控制 **HC, CO 和 NOx, simultaneous control**

→ 防止重新调整 **Anti-adjustment**

- × 遥测 **Remote sensing**
- × 路检 **roadside testing**



维修Repair

- 有效的维修才能削减排放**Repair reduces emission**
 - × 常见的维修质量差,甚至导致排放增加**poor repair is common**
 - × 不正当维修影响车辆使用性能**affect vehicle performance**
 - × 导致维修后的重新调整**cause re-adjustment**
 - × 既要降低排放,又要保证使用性能**reducing emission and improving performance**
- 维修工必须具备一定的技能 **Mechanic training**
 - × 必须针对排放进行培训**focusing on emission**
 - × 诊断是关键**Diagnosis is the key**
 - × 需要测试设备 **Test equipment is needed too**
- 修理行业管理**Repair management**
 - × 修理行业要支持I/M制度的目标**support I/M target**
 - × 需要清楚了解制度的相关细节**understanding program detail**



I/M评估报告 I/M effectiveness evaluation report

→ 质量审计 **Quality audit**

- × 记录审查, 公开审计, 非公开查访等 **Record auditing and other types of auditing**

→ 数据采集与分析 **Data collecting and analyzing**

→ 效果评估报告 **Evaluation report**

This is partly done in Beijing, but network is not established, and evaluation is not carried out

